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## PREVENTING THE TRANSMISSION OF SYPHILIS BY CONTROL OF INFECTIOUSNESS\*

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The United States Public Health Service has recently released as reasonably trustworthy, an estimate of nearly half a million new infections with syphilis annually in the United States; and irrespective of its cost in disability, syphilis has varied in different estimates, between first and fourth place among the causes of death in man since Osler's revision of British mortality statistics. Syphilis is now definitely known to lead tuberculosis and scarlet fever in incidence; it is reported one-third more frequently than diphtheria, three times as frequently as smallpox, five times as frequently as typhoid fever. Six hundred thousand patients with it are constantly under medical care in this country, an estimate which takes no account at all of the enormous number of latent infections for the moment neither under observation nor treatment. What more important subject could a medical society choose for consideration, in the face of these facts, than this one—in very truth the critical health problem of the present day. The prevention of syphilis is not only important in itself—but it is important because the past two decades of medical history with respect to it have been a sovereign illustration of fundamental maxims in the control of disease in general as a public health problem. At one and the same moment (and the fact is one of deep concern to us as individual medical practitioners), the syphilis problem is significant because it furnishes the ideal illustration of the value of controlling infectiousness chemotherapeutically by germ-destroying drugs, and is at the same moment, the outstanding example of the greater effectiveness of state as compared with individual effort in the suppression of disease. Through socialized effort, directed at the control of infectiousness, the incidence of new infections with syphilis has apparently decreased since 1919, five-sixths in Great Britain,

two-thirds in Germany and nine-tenths in Belgium. From France, whose individualism of medical practice compares with our own, and whose incidence of syphilis is, at least for the time being, on the increase, comes evidence as to the reasons for the contrast. An individualistic system for the control of an infectious disease lacks a co-ordinating force, a program controlled through central authority which follows through a plan of attack without regard to temperamental vagary, individual notions based on negligible experience, therapeutic impressionism, prejudice, self-interest and the activities of the pharmaceutical detail man. France, and to some extent this country, suffer from ailments with respect to the treatment of syphilis which Jeanselme and Burnier have clearly enumerated; a disposition to substitute bismuth for the arsphenamins; non-recognition of the infectiousness of syphilis in the woman; abandonment by both private physician and patient, of all treatment as soon as signs disappear; the tendency of the practitioner to try new fads in both diagnosis and treatment; and, among special influences of a social and economic character, an increase in prostitution and an influx of foreign labor. This country, in which, in contrast with the larger part of the Old World, two-thirds to four-fifths of all syphilis is in the hands of the practitioner, may well consider the maxim—"whom the shoe fits, let him wear it." Of the various ways of developing the co-operation of the state and other social agencies in aid of the practitioner, without eliminating him from this field, I have written elsewhere, and have there recorded my belief that such a combination of interests, with preservation of the inestimable advantages of individualism in medicine, can be brought about. I should not, therefore, impose on your good nature and time in mere repetition, but should rather proceed to point out as clearly as I can how you and I, and all others who deal with syphilis, can assist in achieving the alpha and omega of its public health control, and ultimate extinction—the prevention of its transmission from person to person. Once given ideal accomplishment of this aim, as Parran has said, and the

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disease should in theory at least, disappear within the life of a single generation. Even though no such ideal consummation be reached at once, your effort and my effort toward this end, will assuredly bring nearer that Utopian day.

I propose first to present to you certain biologic facts about syphilis, which condition our control of it as an infection. I do this without apology, because I know you agree with me that insight into first principles is essential to inspired attack on a problem. I shall next consider the control of transmission through the older, and always hopeful if not often helpful method, of the patient's co-operation; then its control by treatment, which is the distinctive and immeasurably more significant contribution of modern knowledge to the problem; and finally to certain special aspects of the general thesis, including the technic of controlling infectiousness in early syphilis, in syphilis involving the problem of marriage; in pregnancy; in industrial, social hygiene and public health fields; and finally, that the problem may come home to you directly, among physicians, nurses, and dentists.

*Fundamental Biological Considerations: The Life Cycle of the Spirocheta Pallida.* There is a certain amount of clinical evidence that the spiral form of the organism of syphilis, with which we are all familiar, is not the only form taken by the virus of syphilis; and now that experimental study is beginning to lend tangibility to the matter one can be pardoned for introducing this phase of the subject with a somewhat speculative turn. Paternal transmission of syphilis, difficult to imagine if the organism be conceived as riding a spermatozoon to its destination in the ovum, to produce an infected child from an uninfected mother, could easily be explained if there were a rest form of ultramicroscopic or granular type. It is well established that the semen of the syphilitic male is infectious though spirochetes have rarely been seen in it. So, too, is the macerated and ground tissue of the lymphnode of the rabbit though no spirochetes can be found with the darkfield. Here, then, is the possibility of an unseen enemy in the problem of control of the disease by prevention of infectiousness. Levaditi and his co-workers, and of late Warthin, have lent an unexpected seriousness to the much ridiculed attempts of MacDonough and others to describe a life cycle for the organism of syphilis. While we need not expect a

"leucocytozoon syphilidis," we must be prepared to find that syphilis may achieve an unexpected and perhaps therapeutically inaccessible latency through the discovery of a rest form which is not recognizable by clinical laboratory methods, and hence difficult to test for, and perhaps to destroy by spirillicidal agents. Such considerations may seriously affect many of the generalizations about to be set forth in regard to syphilis in marriage especially.

*Viability of the Spirocheta Pallida.* The organism of syphilis is an anaerobe, requiring furthermore the presence of tissue for cultural growth, and of moisture and protein solutions for survival. These facts make clear certain important rules governing the infectious transmission of the disease. The organism does not survive on dry surfaces, whether of the body or elsewhere. Hence closed lesions, such as the macular and papular secondary syphilitid on the free skin, exposed to air and dry, are not infectious though just beneath the epidermis, the organisms are abundant. The doorknob, the dry clothing, the rooms occupied by such patients, the dust, are entirely harmless. On the other hand, let the epidermis be rubbed or macerated from the surface of a macular or papular lesion, and in the presence of exudate and the relative absence of air, a dangerously infectious lesion results. These conditions are met in the orifices and folds of the body, and in discharges or secretions emanating from them. Hence the extreme danger attaching to contact with the mouth and throat, the anal and genital region, the axillary, inguinal and submammary folds of the patient with early syphilis. Dressings moist with such secretions, since they protect the organism from air in the presence of a protein medium, and instruments, including those of physician, dentist, and nurse, which are used in such sites, are dangerous. Contacts with such regions (and note that these are, like kissing and sexual intercourse, the intimate and emotionally controlled rather than the reasoned contacts of life) are the prime sources of the transmission of the disease. While these facts are being emphasized, let it be noted that the older conception of an abrasion of the receiving surface as essential to infection, which has given rise to much false sense of security, is an error abundantly proved by experimental evidence in even a relatively resistant animal like the rabbit. Opinion now leans as far in the other

direction, in the suggestion of Kolle, that there is a definite type of human carrier, who, like the mouse, has acquired his infection without abrasion or reaction, and who re-distributes it perhaps without open or obvious lesions. It is possible to acquire syphilis without an abrasion, and without a chancre, and to become a focus of distribution without being aware that one has the disease. This is the role apparently played by an unknown proportion of those patients discovered by routine application of the serologic tests to general medical examination and diagnosis, who truthfully deny infection and have never realized until late symptoms appeared, that they had the disease.

The action of disinfectants upon the organism is significant. While the *Sp. pallida* is easily destroyed by weak disinfectants, it is only too frequently protected by the protein tissue constituents of solutions by which it is carried or surrounded. Failure to thoroughly wash before applying prophylaxis may therefore be fatal to effectiveness. There is a tragic absurdity in the spectacle of an assistant putting tincture of iodine on a deep needle puncture obtained in operation on an active syphilitic, or of a nurse rubbing in calomel after a similar accident in drawing infectious Wassermann blood. The needle prick is the chief source of direct blood stream inoculation without chancre, unless nowadays negligent blood transfusions may outrank it. There is an additional disconcerting thought connected with chemical prophylaxis. In the recent International Congress at Copenhagen, Zurhelle showed that application of prophylactic ointments may simply act to prolong the incubation period rather than to prevent the infection of the individual with syphilis. It is a matter for serious question, whether prophylaxis, apparently successful, because no lesion appears, may not have simply cloaked rather than actually prevented infection. In practical work then, soap, water, and boiling stand first, as with other disinfection, and false security from questionable precaution is more often a pitfall than anything else. As I shall say over and over, a sense of security and a low index of suspicion are the chief sources of infection with syphilis.

*Localization Factors.* The association of syphilis with genital contacts is not purely fortuitous. The recent observations of Raiziss, to the effect that the *Sp. pallida*, if introduced into

the cerebral ventricle of the rabbit, does not give rise to a neuro-syphilis as such, but results after a time in the appearance of a testicular chancre, suggests that the genital structures are real centers of elective localization for the organism. Similarly, from our own recent study of relapse phenomena, it appears that recurrent infectious lesions have a pronounced tendency to localize on the genitalia, sixty-eight per cent appearing there or in the mouth, and seventy-five per cent of the genital recurrent lesions being on the penis and vulva, ideally situated for the spread of the disease. The testicle, too, is notable among the elective sites for the localization of the organism. The tendency to perivascular localization, so important to the future of the victim of syphilis, is the result of the fact that the blood carries the organism especially during the early weeks of the disease, but also during its course in later years. Fruhwald showed a decade and a half ago that the blood of a seronegative prostitute could be infectious; and the recurrence of spirochetal showers in the blood stream is the best available explanation of the fact that a syphilitic woman may give birth to a syphilitic infant between two pregnancies resulting in healthy offspring. The control of the hematogenous distribution of the organism within the body is then an item in preventing the prenatal transmission of the disease to children.

Perhaps the most important of all the biologic influences affecting the transmission of syphilis, and one of the least appreciated, is *time*. The acutely infectious period of syphilis covers the first five years of the disease. In fact, infectious recurrences are largely over by the end of the second year, 93 per cent appearing within this period. On the other hand, time can never guarantee the non-infectiousness of a person with syphilis, for there are authentic reports of infectious mucosal lesions appearing as late as 24 years after the onset of the disease. It is true, none the less, that sparing for time is important in preventing the spread of syphilis, whether in permission to marry or otherwise. Every month and every year that can be allowed to elapse between the onset of a syphilitic infection and a possible transmitting contact, decreases the risk of infection. The chancre, the moist lesions of the secondary period, and the relapses on the mucocutaneous surfaces and the genitalia, are the chief sources of dissemination of the disease.

*The Relapse Factor.* We all recognize readily enough, perhaps, the primary infectiousness of syphilis during chancre and secondary periods. Most patients can be made to appreciate the danger they are to the community in these stages. But *relapse* as a source of spread of the disease has never been fully appreciated by the practitioner though the syphilologist has harped upon it since the days of Ricord. Infectious relapse is relatively unobtrusive, painless, and easily overlooked. It occurs in sites invisible to the patient, and rarely examined by the physician. While numerically one-fifth as important as the chancre in the transmission of the disease, the recurrent lesion is almost equally important as a source of infection because of the considerations just mentioned. Here again, a false sense of security, engendered by a little treatment, and a low index of suspicion, spread syphilis.

*The Serologic Factor.* The response of the Wassermann and precipitation tests to treatment for syphilis has led us to one exceedingly dangerous and unwarranted generalization—that cure and non-infectiousness progress hand in hand. The facts regarding the use of the Wassermann test as a guide to infectiousness are these. Infectious lesions may appear immediately following the obtaining of a negative blood test on patients as late in my own experience, as six years after infection. They may appear while the blood Wassermann reaction is negative, and the Sp. pallida may even be demonstrated from them by darkfield, as in a case I presented to an Army class during the war. I have known a physician to authorize intercourse between a Wassermann negative husband and an uninfected wife, without the use of a condom, and three months later the wife was brought to me with early secondaries. The syphilitic chancre is never more infective, and it literally swarms with Sp. pallida, at the precise period in the disease when the actively and acutely syphilitic patient is Wassermann negative. The sharpening of the sensitivity of serologic tests has not helped the situation, because although as high as 96.5 per cent of clinically recognized relapses give positive Wassermanns, these positive tests are obtained in the presence of the full blown lesion, after the damage is in all probability done, and not as anticipatory warning that the patient is about to become infectious. There is, therefore, only one course for the physician to pursue in practice.

Dismiss the Wassermann or any other serologic test from the mind as evidence of the infectiousness or non-infectiousness of a patient with syphilis. It has literally nothing to do with the question, and only ultimate disaster can follow any attempt to use it as proof of the presence or absence of the infectious state.

*The Syphilitic Carrier.* All sorts of interesting problems surround the syphilitic carrier, and I have already alluded to them in quoting Kolle's views on the prophylaxis problem in relation to the production of asymptomatic carriers. An extremely serious phase of the carrier problem concerns the production of chronic infectious relapsers by insufficient modern treatment. Morton Smith some years ago called attention to the disappearance of early lesions of the conventional primary and secondary types under the regime of a few doses of arsphenamin. He might well have stressed their replacement by the arsphenamin recidivist, the product of an era of inadequate treatment. In the old days, the patient, under pills, relapsed and relapsed until the cumulative immunity reaction plus the slow effect of the drug brought the process to a symptomless latency. Conditions were as bad as they could be with respect to transmission. The immeasurably greater potential benefits of the new era, however, have not been realized, because not only does the amount of arsenical generally used by the practitioner in a given case fall far short of what is needed for cure, but his interference with, and defeating of the immunity reaction by insufficient treatment converts the patient the more easily into a chronic recidivist. This generalization applies especially to the group of seronegative primary cases in whom treatment is begun in the chancre stage before secondaries appear, for it is now definitely apparent that the development of full-fledged secondary lesions tends to protect the patient from subsequent relapse. The patient whose early symptoms have been abolished by a few doses of neoarsphenamin, enters on an indeterminate period of danger to his community, represented by the general statement that approximately ten to thirteen times as many patients relapse after eight injections of an arsphenamin, as after twenty-eight injections. I shall apply this observation again later, to the principles of treatment for the prevention of early relapse. Meanwhile let us not forget the infectiousness of relapse.

*Control of Infectiousness Through the Co-operation of the Patient.* In the days of mercury and iodide as the sole agents for the treatment of syphilis, the disease, as I have said, ran its course through a series of infectious relapses in which the control of transmission was largely in the hands of chance and the patient. The results of this state of affairs are before you in the widespread prevalence of syphilis today. No system of control which depends on chance and the patient can hope to accomplish much. Real self-denial on the part of the patient with syphilis is rarely to be obtained, not because he is syphilitic, but because he is human. He is the victim of a disease which is prolonged, insidious and inconspicuous in its most dangerously transmissible phases. His co-operation must be implicit, blind, irksome, and protracted. Yet in the face of such considerations plus some knowledge of human nature we still continue to lay down rules for his guidance, without regard to the realities of the situation. In order that you shall not judge me deficient in respect for the proprieties sanctified by tradition, I set before you a tabular presentation, both of the facts of infectiousness and the rules to be observed by the patient for their control. God bless and prosper your efforts to secure their observance. I still preserve enough faith in mankind to make every patient who comes to me with an early infection, read them through.

There is one way in which the physician can further the value of the patient's co-operative effort in the prevention of infection. This is through thorough examination and re-examination at every possible opportunity during the early years of the disease, to detect the presence of a relapsing tendency, and of actual relapse lesions as such. In spite of what I have said about the unreliability of the Wassermann test as evidence of infectiousness, it does have a certain significance in the early months of treatment. Moore and Kemp have shown that a relapsing tendency is indicated by the too early decline of the Wassermann to negative under treatment. It is also well known that the recurrence of a positive after a series of negatives in an early case is a warning of the existence or prospect of relapse in some group of structures. It is, moreover, known that seronegative primary syphilis which becomes positive within a few days after the first injection of an arsphenamin, be-

haves much as does seropositive primary syphilis, with respect to an increased tendency to relapse when treatment is stopped. Finally, there exists in man as in animals, a definite relapsing type, which does not accumulate resistance except at the expense of repeated cutaneous reactions, most of them in potentially infectious form, during the first five years or so of the disease. These are the patients with delayed secondary eruptions especially. To utilize these considerations in practice calls for frequent repetitions of the serologic tests within the first weeks or months of the disease (Moore and Kemp performed them once a week); and systematic search for the recurrence of infectious lesions about the mouth, throat, and genitalia, especially after treatment is suspended. It is impossible to overemphasize the necessity for thoroughness in such re-examination of treated patients. No swivel-chair examination and "Oh, you look all right" technic will do the work. It is necessary to burrow into the corners with light and tongue blade; to evert the prepuce, paw over and inspect the scrotum, especially the posterior surface, and see the anal opening; to attentively study the flattened palms and soles. I know from experience how irksome and time-consuming this is, but you will be rewarded by some startling discoveries among your supposedly cured patients. Look especially for mucous erosions, supposed fissures with greyish pellicles, "warts," supposed hemorrhoids, "herpetic" lesions on the penis, and the ringed recurrent lesion of the scrotum.

*Control of Infectiousness by Treatment.* An understanding of a few fundamental principles here aids us in the application of rules and standards to the individual case. Contrast for the moment the situation of public health control with respect to syphilis and tuberculosis. In the latter disease, education, isolation, and hygienic attack are still our chief weapons. In syphilis, while these methods have their worth, they are of minor import because they cannot stem the counter-current of the basic urge which underlies the prevalence of the venereal diseases. Without a new weapon, we would be as we are with gonorrhea, at a standstill. Our new weapon is chemotherapy, as yet unknown in tuberculosis, but already far advanced with respect to syphilis. It is not too much to say that it is arsphenamin, and arsphenamin alone that makes hopeful the

ultimate extinction of the disease. It is essential, therefore, to understand the action and peculiarities of the arsphenamins if we wish to do our utmost to control the disease.

*The Action of the Anti-syphilitic Drugs.* The action of the arsphenamines is clarified by a comparison with that of mercury and bismuth. An arsphenamin acts upon the spirochete through the medium of its oxidation products, and destroys it outright with comparatively little effect on the tissues. Mercury, on the other hand, in the body, has little effect on the spirochete but acts rather by stimulating the cell to make its own slow and only partially effective resistance to the disease. Bismuth is intermediate between the two types of action, a better spirillicide than mercury, but a much poorer one than arsphenamin. The action of an arsphenamin upon infectiousness may be summarized by saying that an effective arsphenamin in adequate dosage destroys every surface organism, and hence renders the patient non-infectious within twenty-four hours. The duration of this sterilization is short, and is made permanent only by repetition of the doses at intervals not greater than a week, for a long series. The action of mercury with respect to infectiousness is summarized by saying that condylomas swarming with spirochetes may develop around the anus, right in the middle of a course of the most popular insoluble mercurial salt (mercury salicylate). Bismuth will sterilize, but its action is three to eight times as slow as that of an arsphenamin.

Arsphenamines vary in their spirochete-destroying power. Neoarsphenamin, though so popular, is notably uncertain in this regard, and Dale and White were able to show that a good deal of what was labelled and sold as neoarsphenamin in Great Britain during the war, was powerless to destroy the Spirocheta pallida. Voegtlin confirmed some of these observations for neoarsphenamin made and used in this country. It is important to realize that the spirochete-destroying power of an arsphenamin is not due to arsenic as such. For that reason, other arsenicals, especially the pentavalent drugs such as tryparsamide, and the cacodylates, have no value in treating infectious syphilis, for they are feebly or not at all spirillidal. It is the valence of the arsenic and the linkage in the dye base that counts.

#### SUMMARY OF THE FACTS OF INFECTIOUSNESS

1. The more recent the infection, the more dangerous.
2. The blood Wassermann reaction is not a guide to infectiousness or non-infectiousness. It may be negative with infectious lesions present and positive in non-infectious cases.
3. The most infectious lesions are: chancre, mucous patch, condyloma, moist papule (flexures).
4. The places to look for infectious recurrent lesions in inspection are: lip (outer and inner surface), angles of mouth, faecal pillars and tonsils, sides and bottom of tongue, axilla, nipples, inguinal folds, labia, penis, scrotum, anus (piles).
5. All open or eroded lesions in early syphilis are dangerous.
6. Infection is also transmitted by semen and by benign non-syphilitic lesions (herpes) in patients with syphilis.
7. Syphilis is transmitted mainly by intimate contact of moist surfaces; i. e., by kissing, sexual intercourse.
8. Moist articles and discharge-bearing dressings and articles of common use can also carry infection.
9. Thorough washing in hot water and soap disinfects contaminated objects. The additional precaution of boiling dishes, utensils, and such articles as douche nozzles, instruments, etc., in soda solution may be used.
10. Dry objects, and dry (not crusted) lesions are non-infectious.
11. Pyogenic infection reduces the infectiousness of the local lesion.
12. Trauma by an infected object (knuckle striking teeth, needle prick) makes infection almost certain; it may be hematogenous and without chancre.
13. Transfusion is a means of transmitting syphilis. A single negative blood Wassermann test in the donor does not protect.
14. There is a distinct infectious relapsing type of syphilis that must be watched for. To such a patient, no assurances can be made.
15. Local irritation favors infectious recurrence; dirt, sweat, discharges, friction (intercourse), tobacco (smoked or chewed).
16. Time diminishes the infectiousness of syphilis. After five years, few cases are infectious; desultory, non-curative treatment, with relapses, may prolong infectiousness many months or years. No treatment can guarantee the non-infectiousness of syphilis indefinitely.
17. Secondary relapses have been seen with general paresis after twenty years. Inadequate treatment favors infectious relapse.
18. Late syphilitids are not infectious even though open lesions are present. Do not confuse with recurrences.
19. Mercury does not control infectiousness.
20. Bismuth, while more effective in this respect than mercury, is less so than arsphenamin.
21. Arsphenamin controls infectiousness, probably as long as one month from the last dose.

#### SUMMARY OF PERSONAL HYGIENE INSTRUCTIONS FOR THE SYPHILITIC PATIENT

1. Do to others in this matter as you would wish them to do to you, if you were well and they sick.
2. Don't kiss. Change your disposition if you have been effusive.
3. Sleep alone.
4. Trust wife or husband with the facts.
5. Have your own towel and dishes at home. When away, eat where you know they scald the dishes.
6. Never use another person's shaving tools, his cup or dipper, his spoon or other eating tool, his pipe or cigarette holder, his toilet articles, and never let him use yours.

7. Consider every open sore infectious until you have seen your doctor. Burn the dressings.
8. Watch for "patches," cold sores, cankers, pimples, chafes and piles, and see your doctor if they appear. Consider yourself infectious.
9. Get your doctor's instructions relative to sexual matters, and follow them.
10. Don't smoke, if you are within five years of the beginning of your infection.
11. Don't worry. Keep free of mental strain as much as you can.
12. Sleep eight hours a night.
13. Avoid overwork, but keep reasonably busy.
14. Gain weight unless your doctor says not to.
15. Exercise as usual in the open air, unless otherwise instructed.
16. Avoid chilling and getting wet.
17. Report all colds, coughs, sore throats, and other infections to your doctor while you are under treatment.
18. Avoid injuries. They may start trouble. Be especially careful to avoid sprained joints and blows on bone.
19. No alcoholics.
20. Realize that your chances are good for recovery, and make the most of them.

The complete dependence of the prevention of infectiousness, not to say even the so-called cure of the disease upon the arsphenamines is perfectly illustrated by a number of recent clinical observations. Moore and Kemp found a definite decline in the frequency of recurrent secondary syphilis proportional to the number of arsphenamin courses received by their patients. Of 196 patients receiving from one to eight injections of an arsphenamin, 20 per cent had potentially infectious recurrences; of eighty-nine receiving six to twelve injections, 10 per cent or only half as many relapsed; of forty-six receiving thirteen to twenty injections, 10 per cent, and of seventy-one receiving twenty-one to forty injections, only 5.6 per cent relapsed into potential infectiousness. Besancon, Schoch and I found in my own clinic that 85 per cent of our patients who relapse with the appearance of infectious lesions have had less than twelve arsphenamin and ten heavy metal injections, a figure which almost exactly confirms the 88 per cent found by Moore and Kemp. The study presented before the International Congress of Dermatology and Syphilology this summer showed with clearness and exactitude, based on large numbers of cases collected from five co-operating American clinics, that the critical point for a large proportion of patients with reference to the prevention of potentially infectious relapse, lies between the fifth and the ninth injection of "606." Even with identical amounts of heavy metal in both groups, those who received only one to five injections of arsphenamin relapsed five times as often as those who received five to nine injections.

Modern treatment, then, depends for the prevention of infectiousness, on the arsphenamines, and not on either mercury or bismuth, essential though these elements are in the successful outcome and "cure" of the individual case. The patient in the first two or three years of a syphilitic infection who receives from his physician less than twenty arsphenamin injections, remains a vastly greater danger to his contacts and the public health, than does the patient who receives more than twenty injections.

My time allotment must have some consideration—so that I know you will now pardon the didacticism of a succession of short summaries setting forth the application of the foregoing principles to various special phases of syphilis.

*Control of Infectiousness in Early Syphilis (First Three Years).* This is "Today's World Problem in Disease Prevention." Let me stress to you the vital importance of two factors, time and arsphenamin — *time*, because every hour gained in putting an early infection under treatment nips future contacts, and increases the proportion of radical cures—*arsphenamin*, because, as I have shown you, it is the only quick destroyer of the organisms, and the absolute leader in the field of infection control. On the question of time, I might harangue you on the darkfield, as all of us have done; and leave you without the knowledge or equipment to use it. I recognize the individual impracticabilities of the darkfield, and I therefore urge you not so much to buy one and use it, as to require of your state laboratory that it develop a darkfield service comparable to its present Wassermann service, and supply you with the pipettes and mailing cases to secure for your patients with suspected chancres darkfield examination of the chancre serum within the first few days of the life of the lesion, while the blood is still negative to Wassermann and Kahn. If your state will not provide the service, get it from the hospital or pathologist in your neighborhood. Develop a local darkfield man who knows his spirochete when he sees him, and try for cure in the seronegative phase. Refuse to listen, first of all, to those of the Old Guard who advise you to wait for secondaries to appear, in order to "give the patient a good reaction." There is absolutely incontestable evidence that though this may affect somewhat the tendency to recurrence, it reduces the prospect of cure for the in-

dividual 25 to 40 per cent. More than that, withholding arsphenamin maintains for days and weeks a focus of dissemination of the disease in the community, not subject to quarantine, and unquarantinable even if there were regulations, that spreads syphilis broadcast as of old. Throw the detail man out of your office who advises you to try his firm's intravenous preparation of bismuth alone on an early case—or any other preparation but an arsphenamin compound. The French have tried bismuth this way, to their sorrow. Even the contrast between an arsphenamin and an arsphenamin-bismuth compound is illuminating in this particular, for an arsphenamin alone in adequate dose is three or four times as fast a sterilizer of active lesions, as is the arsphenamin - bismuth compound, bismarsen; though properly used, bismarsen is apparently the superior from the curative standpoint. It is possible without in any wise sacrificing the interests of your individual patient to fully preserve and further the public health concern in the early effective use of an arsphenamin.

Of the subsidiary principles involved in the control of infectiousness in early syphilis, I would offer these: Allow no rest periods in the first eighteen months, for these lead to relapse. Use a heavy metal, preferably nowadays bismuth, side by side with and in the intervals between arsphenamin courses. Be moderate in dosage, but effective, for less than 0.3 gm. of an arsphenamin is of doubtful utility, and more than 0.5 gm. of "606," or 0.6 gm. of "914" may destroy tolerance and cut treatment short. Mass the patient's treatment early, giving the injections closer together at the start, and getting all the treatment you can into the patient within the first three or four months. Then *keep on*, and try in every early case to reach thirty-six to forty injections of an arsphenamin, in courses of twelve, ten, or eight injections, plus the accompanying bismuth. Never, no matter what the stage or circumstances of the case at the start, give so-called abortive cures, such as a single course of eight injections or less, or put the patient on pills, or any other form of treatment than a continuance of his arsphenamin. Abortive cure has disappeared from the practice even of Germany, which originated it. Treat every case to a maximum, determined, not by your personal experience with a few patients, or your detail man's experience with none, but by that of the best syphilis clinics

of the world as presented in the literature and through your state and national venereal disease services.

*The Control of Infectiousness in Late Syphilis.* Here the time factor is paramount. Lose your dread of the gumma and the tabetic patient if you have any, for the transmission of the disease does not lie at their door. I believe it was Hoffman who reported the famous example of a man with gumma of the penis, who though by no means abstemious in unprotected intercourse, did not transmit the disease to his uninfected partner. Latency in marriage is, of course, a special problem, to be presently mentioned—but in general, one need not fear the infectiousness of late syphilis nor make life unduly hard even for prostitutes who have had the infection for a decade or more.

*The Control of Infectiousness in Sexual Relations and Pregnancy.* You will notice, of course, that I have not said "marriage and pregnancy"; for I would wish you in considering this matter to be realistically rather than moralistically minded. Marriage is only a part of the problem, as one well realizes when a seemingly intelligent young man replies to his doctor's warnings by saying, "Why, of course, I would not stay with any nice girl, Doctor, while I have this thing." Whether for better or for worse, the niceties have faded out of the modern situation with the decline of the double standard, and the instructions to the patient and the course to be pursued in reference to possible sexual contacts, must be the same for the married and the unmarried. Therefore I suggest that you lay before all patients, in the first interview after diagnosis is made and the first treatment given, the facts I have recounted to you, regarding time-treatment relations in the transmission of the disease. I suggest you set forty arsphenamin injections, rather than five years, as a probable landmark in the resumption of sexual activity. Then, if you live in a state or community where enlightenment is possible, remember that infectious recurrence involves especially the penis, the vulva, and the mouth parts, and that the semen may be infectious. Keep them apart by impervious protection rather than chemically. Though I speak in terms of almost urologic barbarity, I would not belittle the influence and worth of ethical pressure, and would spar for time between infection and my patient's resumption of sexual activity.

by every device known to the temple, the court, and the sawdust trail. I fear to seem facetious or cynical, for these issues are critical, and a religious or moral appeal that holds even an occasional syphilitic man to arsphenamin and keeps him from women, has public health worth. Remember again not to base decisions as to infectiousness on negative serologic tests, lest you wreck some innocent woman or child by premature permission to a husband. And once you have in your best judgment authorized sexual activity, keep constant check upon it in the early years, limiting it to the times when the patient is under arsphenamin control if possible.

The problem of preparation of the intelligently co-operative man or woman for the conception or bearing of a child is still on a theoretical basis, for so few patients can be kept under the necessary control for the purpose. In theory one should prepare both the syphilitic man and woman for the conception of a child with an arsphenamin and bismuth course. More frequently we are called upon to deal with the situation and prevent infection of the child only after conception has occurred. On this matter there can no longer be two opinions. I cite you simply for concreteness the notable statistics of Boas and Gammeltoft (Nabarro, Brit. Jour. Vener. Dis. 1928, 4:107). In a total of 201 cases of syphilitic mothers receiving no treatment for the disease, 96.5 per cent of the children were syphilitic, and 3.5 per cent healthy. Of eighty-seven syphilitic mothers receiving mercury before pregnancy but none during, 90 per cent of children were syphilitic and 10 per cent healthy. Of fifteen mothers receiving an arsphenamin before pregnancy, but none during, 80 per cent of children were syphilitic and 20 per cent healthy. Of 111 mothers receiving mercury only during pregnancy, 72 per cent of children were syphilitic and 28 per cent normal. Of twenty-six mothers receiving arsphenamin before and mercury during pregnancy, 27 per cent of children were syphilitic and 73 per cent normal; while of 105 mothers receiving arsphenamin during or both before and during pregnancy, only from 15 to 20 per cent of children were syphilitic, and from 80 to 85 per cent normal. It is unnecessary to point the moral of these figures. Translated into practical terms, every pregnant woman, regardless of age, social status or other circumstances, should have a serologic test for syphilis as soon as she is first seen by her ob-

stetrical attendant, and this test should be repeated by the seventh month. Every mother who has or has had syphilis, regardless of the age of her infection, of her serologic findings, whether positive or negative, and almost of her general state, can and should have some arsphenamin, preferably both before and during, but at least during, her pregnancy. The prescription may vary in individual cases, for a syphilitic heart or liver, for example, modifies the rule; but in general, the arsphenamin should be begun early, given through the larger part of the pregnancy, and be combined with bismuth at least part of the time. The dosage can be moderate, but should not be picayune, and the postpartem follow-up of mother and child must be complete and protracted. An enormous harvest of prevented infection with syphilis awaits the adoption of these rules by the profession at large.

*The Control of Infectiousness in Industrial Relations.* My time allotment and your patience is hardly lengthening, so that I devote only a word to this interesting subject. The crux of the syphilis problem in industry is the recognition of the infected person. Perhaps I might place ahead of this the problem of getting the issue before the czar-like official autocracies that too often bar the way. The principles involved are these, as I learned them in my study of railroad men: syphilis is overwhelmingly acquired in youth. It is infectious in its early years, and coincidentally it is apt to be serologically positive during this period. The appropriate mass measure, aside from detailed periodic physical examination, is the taking of the blood Wassermann test on all persons between the ages of seventeen and thirty-one, on entering employ, and at such intervals thereafter as may be practicable within the age period named. Understand that this Wassermann is taken, not to detect infectiousness, but to identify the presence of syphilis. Further medical examination is then essential to determine the status of the detected case, which may, of course, not be infectious at all, even though serologically positive.

As a matter of fact, with the disappearance of the common drinking cup (if it has disappeared), the transmission of syphilis in industrial relations as such, is probably of small moment. When both sexes work in contact, it is more important to attack the social hygiene problem than the epidemiologic one, through the instrumen-

tality of matrons, effective shop discipline, education. Even in food handlers and cosmetic workers, the risk of transmission of syphilis may be exaggerated, though it is true that one sometimes shivers when he watches the technique of barbers, dining-room, kitchen, and soda fountain help from behind some scenes. Periodic serologic testing of such persons is probably desirable for detection purposes. The most tragic aspect of the matter is the least known—the children infected by irresponsible and immoral servants in the home. I have seen everything from tabes in the house mother of a great girls' school dormitory, to a chancre on the penis of a two-year-old baby, traced to the activities of the crooked and infected nurse. Here at least is a field that merits genuine effort at study and control.

*The Social Hygiene and Public Health Aspects.* The reservoir of syphilis, up to the War, was prostitution, organized and unorganized. It is impossible to quote the vast mass of figures from every source demonstrative of this fact, but in the study of prenatal syphilis and of the infected father and mother which I made preparatory to the chapter of my text on this aspect of the disease, the realization was most clearly brought home to me. Of the fathers of my little syphilitic patients, 90 per cent had acquired the disease extramaritally. Just what role the so-called emancipation of women is likely to play nowadays in the dissemination of syphilis, is as yet largely material for speculation. I question if the role will be a large one—the worldly-wise maiden is beginning to understand the protective virtues of caoutchouc too well to take unnecessary chances, if my impressions from the venereal confessional are any guide. At the same time, Jeanselme and Burnier seem to feel that increasing prostitution is a significant force in the wrong direction. Two or three things do seem to stand out, that deserve mention. The younger a prostitute or a free lance, the more dangerous, for obvious reasons, and hence the more in need of control. This word raises at once the question as to whether there can be such a thing as control. Some very interesting experiments have been tried recently in this direction, among them Kolle's effort to keep prostitutes non-infectious by the injection of what he called "bismuth plugs" intramuscularly, which he hoped would prevent the development of infectious lesions. Nothing notable has been

published thus far to my knowledge on the matter. I may tell you that my lifetime's experience with syphilis such as it is, has made me an abolitionist. No one who knows the disease, seriously expects to control or influence its incidence by the provision of segregated districts and inspected girls. Public health control of venereal disease as it concerns the infection focus, centers around the tracing of the source of each and every early infection identified, and the immediate sterilization and supervision of that infectious source by every available means, but most of all by making treatment not so much forced as attractive and easy. Every practicing doctor can contribute to this end by trying to bring in the source from which his patients are infected and by demanding of the state that it interfere here, instead of in the treatment of tabes and paresis, the mere non-infectious end results. A state social service could do wonders in backing the doctor by bringing in for treatment the foci that spread the disease among his patients. The report or notification and the quarantine, while orthodox weapons, have helped me far less than the two or three socially minded and intelligent women that used to trace sources for Irvine in Minnesota during the war. The entire policy of a great nation, England, in dealing with the venereal diseases, is founded on co-operation and education rather than compulsion—not without some protest, however.

Let us do what we can, too, to spoil the business of the druggist who prescribes and dispenses to venereal patients. He ruins the early detection of the disease too often. And let us not expect too much of personal chemical or packet prophylaxis. I see something of it among men of more than average intelligence, and I doubt if among the average it is worth anything at all. A half-drunk man and a prophylactic packet are no match for the spirochete. Remember that it is station prophylaxis under organizational conditions that worked the wonders on the venereal situation in the War.

*Control of Infectiousness in Physicians, Dentists, and Nurses.* You remember the ancient saying that curses like chickens always come home to roost. My closing paragraph is the appropriate place for such a consummation. No one who deals with syphilis day in and day out can fail to realize the tragic incidence and the deplorable

outcomes of the disease among those whose professions bring them in contact with it. Several facts have high significance here. Syphilis is the Dangerous Unexpected. It is not the syphilologist who acquires it, even from a lifetime of potentially dangerous contacts. It is the practicing doctor, secure in ignorance, of a low index of suspicion, of a mistaken casualness and bravado, and irresponsible in treatment, who meets ruin in this way. It is a legitimate demand on the public in protection of professional attendants, that patients submit to a routine test for syphilis as part of every medical examination. Now that the precipitation tests are coming to the requisite simplification (as witness the presumptive Kahn and the finger-test Kline), it is no longer necessary to remain in ignorance of a patient's condition on this important point. One can know that one is dealing with potentially infectious material in twenty minutes, where such facilities are available. Nowhere will such a help be more important, if I may digress momentarily, than in the prevention of transmission of the disease by blood transfusion, one of the most shocking and regrettable miscarriages of modern therapeutics that can befall a hospital or a medical staff.

Two additional items calculated to protect the profession from accidental syphilis, are an adequate light for the examination of patients in the office, and an absolutely unbreakable habit of inspecting orifices. If the examination of the fourchette and labia before passing the palpating finger; of the commissures, buccal mucosae and throat before introducing dental instruments; of the anal and vaginal openings before passing tubes and thermometers, were conducted with a good flash lamp, many a finger and many a life would be spared. Good gloves, new gloves, and condign punishment for pinholed gloves handed to an examiner, would mean much. The habit of warning the patient not to cough; the learning of that difficult art of looking *at* not merely through or past the small things one encounters on an orificial inspection; these would help. Special realization of danger on the part of those who deal with the woman's invisible genital tract in diagnosis and treatment, and those who operate upon the nose, throat, and anus, where danger is always imminent and always unexpected, would help. And when infection occurs, some medical knowledge of the extragenital chancre—which is not a felon, not a boil, not a sarcoma, not "just an infection," would help too. Indura-

tion, indolence, and satellite adenopathy, the three keystones to physical diagnosis of the chancre, could help us to an early darkfield, an early diagnosis, and a probable cure, much oftener than they do.

I would recommend it to you as a protective procedure, that your patients with recognized and not recently treated syphilis who are up for operation, receive, if no emergency or special aspect of the disease contraindicates, one or two injections of 0.45 gms. neoarsphenamin before they are operated on. At least ask the advice of a syphilis man on the matter. I know the risks of surgical infection with syphilis are small in some aspects of the work; that there are hoary-headed masters of the surgical art who have come through forty years of operating untouched so far as they know. But I have seen too many men marred.

Writing this paper in my study, I picture my audience as hearing with patience and comprehension — perhaps, too, with some considerate indulgence, the effort of one who was once kindly called a crusader, to bring this subject home to you. Being generously disposed to strangers, and as your records show, genuinely concerned over this aspect of the public health, your enlightened outlook will accept, I know, the conclusion of the whole matter. The responsibility for the modern control of the infectiousness of syphilis is not in the hands of the church with its preaching, the law with its mandates, or the laboratory with its drugs. It lies today, to be met or ignored, with the everyday doctor.

#### DISCUSSION

DR. J. W. BASTIAN (Wilmington): I should like to say a word or two on this matter. The treatment of syphilis, of course, is a very broad subject and it would be rather unwise for me to question such an eminent authority as Dr. Stokes, but there are a few things I want to ask, and I should like to raise a point of information.

I happened to graduate before we had the Wassermann test and arsphenamines and all kinds of things. By the way, when they were first brought out, the technique of administering them was very delicate and required some special apparatus, and consequently very few, particularly the men in general practice, ventured to use the so-called arsphenamines, then generally spoken of as "606."

John B. Murphy, of Chicago, mentioned the

sodium cacodylates which Dr. Stokes has just said are useless.

I at that time was connected with a large general hospital and we had a large number of syphilitics there all the time. I had one case of very active syphilis. I gave him, I think, as high as 30 grains of sodium cacodylate. The immediate clinical effect was wonderful, but the after effect—

DR. STOKES (interrupting): Intravenously or intramuscularly?

DR. BASTIAN: Intramuscularly. I started out with a grain and worked him up to thirty. The immediate effect was wonderful, but the man stopped treatment, contrary to my advice and some few years after that I was called in to see him, and he was in bad shape. I won't undertake to discuss our idea of the other treatments.

I should like to know about the advisability of using sulpharsenol, which you can get highly recommended by a firm which we think is reliable. I have used that some, although I treat very few cases, but I have used that with some few cases with apparently good results.

I think the trouble with most physicians is that as soon as the patient finds he is a little better and the active symptoms have cleared up, the patient absolutely refuses to return. I don't think we can condemn the medical profession or the end-results so much as the patient.

DR. M. A. TARUMIANZ: We have all enjoyed Dr. Stokes' paper very much. I should like to ask a question or two. Since the general practitioner has to consider the treatment of syphilis, and the general practitioner has not had the privilege of using arsphenamin as often as neoarsphenamin, I think it would be instructive if Dr. Stokes would tell us how to use neoarsphenamin in treating syphilis in the primary or secondary degree or state.

DR. ROBERT W. TOMLINSON (Wilmington): I believe Dr. Stokes stated in the course of his paper that the Wassermann reaction, that is, the negative Wassermann, could not always be depended upon as the barometric indication of the status of the patient subsequent to a course of injections of neoarsphenamin or arsphenamin.

This thing has a particular poignancy of interest to me as the attending physician at the State

Prison, where we have a more or less large incidence of syphilis. If we cannot depend upon the Wassermann to indicate the curative status which has been attained in the existence of the disease, I wonder if Dr. Stokes will apprise me of what modus operandi can be used relative to the taking of subsequent Wassermanns and further doses of arsphenamines.

DR. D. T. DAVIDSON (Claymont): I should like to say something relative to the expenses of the general practitioner carrying on the treatment. Fortunately or unfortunately, I feel that many patients with syphilis do not come to a general practitioner.

I was interested in Dr. Stokes' suggestion that the general practitioner should take a Wassermann on every pregnant woman who consults him. New Castle County recently adopted a scale of fees for maternity cases, and \$35 was considered the normal base fee for an uncomplicated maternity case in the home. If these general practitioners get \$35 for the conduct of a maternity case, I should like to know how we can get a Wassermann, or treat them, or expect to do very much in the way of prophylaxis. It is a question of money, and they might be willing, but I should like to know what Dr. Stokes' feeling is about the normal expense for such a course of treatment.

DR. JOHN H. STOKES: These questions raise some extremely interesting points. Since the hour is late, I won't be able to go into them. I should be glad to send some written material.

The first question was on sodium cacodylate. That is a very interesting problem, but what probably happens in the case of sodium cacodylate is that you get the sharp reaction-producing effect and the non-specific effect of the intramuscular, as distinguished from the intravenous, administration. The critical work on Murphy's pronouncement was done by Nichols, of the Army, and Cole. They gave it intravenously, and showed it hadn't the slightest effect on the spirocheta pallida. Murphy gave it intramuscularly.

Of course I would not advocate sodium cacodylate because arsphenamin is able to do the work better.

The question on sulpharsphenamine is extremely interesting, and I am interested because

I was the first American to use it in any quantity, and I tested it out and did the clinical work on this preparation to which you referred. The situation in sulpharsphenamine is this: there is no question of its effectiveness. Used intramuscularly it is one of the most efficient drugs available for the treatment of syphilis. Intravenously it has nothing over neoarsphenamin. But it is responsible for the most serious of all reactions, namely the highly fatal hemorrhagic purpura.

I had never seen a case of this sudden and fatal trouble which overtakes patients until I began to use sulpharsphenamine, and then I saw five cases in a row, and I received many letters of inquiry. The second thing the matter with sulpharsenol is the intense exfoliative dermatitis. You have a right to expect it with neoarsphenamin about once in 4,500 cases, and with the sulpharsphenamine once in 700 cases. If you have followed the cases of exfoliative dermatitis through, you don't want to take that chance, so I have ceased to use sulpharsenol, for I think it has been replaced.

The Doctor is perfectly right. I hope that my paper didn't have the tone of riding the practitioner because he can't bring his patients back. That is the dismaying thing about the situation at the present day. At the same time there are ways to overcome it. If we don't overcome it, the state will take it over for us, as is done all over the world, except here and in France.

I think the first step in preventing patients from leaving you flat is to become their personal friends in the first interview. I know that is a large order. A busy doctor simply can't sit down and take the time. It takes an hour really to get to know that fellow. Get to him and talk to him. Get him to talk to you as a personal friend and understand from the very start that this whole situation is as it is. The first reason is financial; the second is too little contact; and the third is discomfort from reaction. If you nail the patient in the first interview, you will get farther. You won't produce an ideal state of affairs, but you will get farther.

Now as to the question of neoarsphenamin. I was asked to recommend some method. I spanked neoarsphenamin, as I always do, because if I had a syphilitic infection which I could recognize, I would want arsphenamin, but I know only one person I would want to have mix it and admin-

ister it, and that person is the head nurse in my office. I can't recommend "606." I used to, and it is used by five of the best clinics in this country, that is, we think they are the best. I criticize them. They are impractical. This is not something a doctor can use, "606."

Now how do you use neoarsphenamin? I think Dr. Schamberg has gone as far towards outlining the general principles as anyone. He has been a champion of it, and the best neoarsphenamin from thoroughly good manufacturing concerns is selected for his use, so he doesn't see some of the rotten spots in neoarsphenamin, but the general opinion is that the dose to the average adult should not exceed six decigrams and that most adults and certainly women should not receive over 0.45 grams; that the injections right at the start should be given not more than three days apart; that bismuth should be administered simultaneously, intramuscularly — none of the intravenous bismuth preparations—and that the course of injections should have the interval increasing a little bit. When the dose gets a little higher, it should consist of twenty plus twenty, so they get twenty in the first course, not over a month's relief from the neoarsphenamin while taking bismuth to overlap the gap, and another course of twenty, so they are as near forty injections of neoarsphenamin as they can get.

Everybody knows that won't cure all persons with syphilis, but it seems from rational grounds, that it may "cure" most cases. In spite of the vast amount of neoarsphenamin used all over the world, there is not in existence a single adequate report of its therapeutic effectiveness that compares with the work of Moore and Kemp on arsphenamin at Johns Hopkins, so we are at sea about it and we don't know where we are, but that sounds like a good system.

Dr. Tomlinson asked a question about the indications for cure of the Wassermann, particularly in jailbirds and people whom you can keep under your thumb only for a limited time, after which they go away and you don't know whether they are cured or not. In the first place, Dr. Tomlinson, I was not discussing the curative significance of the Wassermann, but its value as an index of infectiousness. You can't tell any patient that is dismissed that his negative Wassermann proves him to be non-infectious. It can't be done, but with the jailbird, fill him just as full of treatment

as his sentence permits, and if you have a standing with the judge or probation officers and can keep him long enough to get thirty-five or forty treatments, with co-incident injections of bismuth, that is the thing to do, and not consider his Wassermann. If he is up for thirty days and you discover he has syphilis and you have thirty days to do the whole works, get all the treatment you possibly can into him, risking giving him an exfoliative dermatitis. Crowd as many bismuth and arsphenamin treatments in as you can in that time, but don't have in the background of your mind that when he goes out he will be non-infectious.

Next was the question of expense, particularly with reference to the standard fee for obstetrical examination. Expense is the chief reason why patients don't follow through the treatment. There is where I think the state will have to come into it somehow or other. I should like to see the state, in the first place, make arsphenamin cost nothing, the way it is in Massachusetts. You just write and ask for it and you will be given all you want. That is all you have to do and there are no questions asked. It is not for the treatment of indigents only, but for everyone.

In the state of Delaware the problem is unquestionably a highly special one. I know nothing of your state laboratory, so that what I say about laboratories has no specific application to you, but you should have some form of state laboratory that makes arsphenamin cost you nothing, not even postage. The government should supply a franking privilege, if it can be done, so that need not add to the expense of finding out whether she has syphilis or not, and if you find she has, and you have to treat her and deliver her for \$35, I throw up my hands; it can't be done. The state will have to step in. Perhaps the state will supply you with the arsphenamin, and perhaps ultimately with a small compensation as a deputy of the office, as we did with Minnesota during the war. You would get very little, but you would get enough to pay for the trouble of boiling up the syringe, and perhaps you can manage.

I hope you will go half way and more in the effort to keep it in your own hands, because I can't help viewing with more than alarm the rapid disappearance of individualism from medicine.

## ON THE CHIROPRACTIC BILL

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In the Wilmington press of March 3, 1931, reference was made to some statements by "H. L. Wilson, A. B., Doctor of Chiropractic," concerning the passage of a chiropractor bill by the state legislature.

Chiropractic is defined as "a drugless health system, the basic principle of which teaches that disease is caused by interference with the transmission of nerve impulses." Chiropractors assert that germ diseases cannot be contracted by any person whose vertebrae are in normal position, and that such diseases can be cured by restoring any misplaced vertebrae to its proper position. They assert that diseases which medical science attributes to varied causes or to causes still unknown are all due to displacements of vertebrae, and that they can be cured by restoring such vertebrae to their proper positions. Among the diseases alleged to be thus caused and thus curable are cancer, insanity, heart disease, diabetes, blindness, and deafness. This information is taken from reported extracts from testimony given in court cases.

As William C. Woodward, M. D. LL. M., Director of the Bureau of Legal Medicine and Legislation of the American Medical Association, says: "The idea of a person who has only preliminary education or *experience equivalent* to a high school education and who has studied chiropractic not more than eighteen months, and who is devoid of hospital training, assuming the responsibility of diagnosing and treating all manner of diseases and injuries, not only from the standpoint of his patients, but also from the standpoint of public health and civil and criminal justice, is preposterous. And when it is remembered that the examiners who are to pass on the qualifications of would-be licentiates have only the qualifications just named, the absurdity of the situation is accentuated." I suppose it takes that long or longer to become a good automobile mechanic.

In referring to the provision of Section 10 for licensing without examination of persons who hold certificates from "the National Board of Chiropractic Examiners," Dr. Woodward asks: "What is the National Board of Chiropractic Examiners, and who supervises its activities? How much does a certificate from that Board cost? What are its standards?"

In a court case the following on cross-examination of B. J. Palmer is reported:

Q. Your father gave birth to chiropractics?  
 A. No. He could not give birth to an idea.  
 Q. Isn't it a fact that you stated on the stand the other day that chiropractic was born, or that your father gave it birth fifteen years ago?  
 A. Father, not being an obstetrician, he could not give birth to an idea.  
 Q. There cannot be such a thing as diphtheria without a subluxated vertebrae?  
 A. Subluxation must exist, and then comes the diphtheria.  
 Q. Is there a subluxation for syphilis?  
 A. Yes.  
 Q. Don't you know that syphilis is transmitted to the third and fourth generation?  
 A. I do not know that to be a scientific fact.  
 Q. Well, did your school teach during those years that gonorrhea was caused or accompanied by a subluxation?  
 A. We did.  
 Q. And what particular vertebrae did you teach them to adjust for lice on the head, if any?  
 A. The adjustment for any scavenger would depend entirely upon where that scavenger was.

Q. Isn't it true, Doctor, that you don't find anyone—either well or sick—without some subluxation of the spine?

A. I have never seen one perfect spine.  
 Q. Have you ever examined the spine of a person who was perfectly well?  
 A. I have examined the spines of those reputed perfectly well, and found them with subluxations, and found them sick.

Q. Well, have you ever examined the spine of anyone that you, yourself, pronounced to be well?

A. No, because I have never seen such an individual.

In another case.

Q. Can you cure cancer by readjustment of the spinal vertebrae?  
 A. Yes.  
 Q. Can you cure cancer of the stomach and liver and bladder by readjustment of the spinal vertebrae?  
 A. Yes.

One of our senators stated that people go to chiropractors after the physician has failed to benefit them. How about the case of a fourteen year old boy in one of our cities who went to a chiropractor because of pains in the abdomen, was manipulated for a subluxated vertebrae until he became so ill that he was taken to a hospital where he died the day he arrived, too late for an operation; but an autopsy showed a ruptured appendiceal abscess and death from peritonitis? How about a case, nearer home, of optic atrophy caused by syphilis, who went to a chiropractor because he was told the chiropractor had cured another case just like his? He received treatment until he became insane and had to be confined in an institution. Many other cases could be cited but enough certainly has been brought

out for any average-minded person to draw conclusions.

Dr. Charles Mayo said: "The claims of chiropractors are preposterous. Lacking a fundamental education in medicine, they resort to the advertising methods of novelty stores to gain business."

Dr. Frederick Peterson, a noted New York nerve and mental specialist, said: "Chiropractic treatment carries with it a mental suggestion which in some neurotic disorders may appear to work a cure. A patient thus afflicted feels the chiropractor's thrust. He hears a click which he is told is one of his vertebrae being put back into place. He is told that the cause of his disease has been found and will surely be overcome, and he will surely get well. To such a person, who is sick largely because he thinks himself sick, this sort of claptrap makes a potential appeal. And the story of his cure is soon told and retold by his chiropractor and himself to all his friends and acquaintances."

In a report of Mr. Justice Hodgins, which is from the report of the Commissioner appointed by the government of the Province of Ontario into all matters relating to the practice of the healing art, it is stated that "Dr. Palmer, who conducts the principal school of chiropractic, in Davenport, Iowa, was present at one of the sessions of the Commission, and in the course of his address said: 'The chiropractor did not believe in bacteria, and that bacteriology was the greatest of all gigantic farces ever invented for ignorance and incompetency, and as to analysis of blood and urine, he considered it of no value.' " The Justice in this report states regarding chiropractics: "Their repudiation of all modern scientific knowledge and methods is such that it would be impossible to recommend any way in which they could be allowed to practice by which the public could be safeguarded."

To say, that anybody or any group is allowed to practice against the law is a serious charge against the government of the state.

As far as I know and have been told by the chairman of our Legislative Committee we were given practically no notice when this bill was to be brought up. I did not know when the bill was coming before the Senate until I received a phone call last Thursday at 1 P. M. that we would have a chance to testify at 2 P. M. How many doctors could leave their patients on such short notice? How would any of you like to be

posted for an operation at 1.30 and find your surgeon was on his way to Dover after he received such a notice at 1 o'clock? When we appear before either branch of the legislature in such a matter it is not we who should offer thanks but those in whom the public welfare is entrusted, and whose duty it is to inform themselves before acting upon a momentous question. Why don't some of these people who believe that chiropractic is what they say it is come forward and prove it like some of our men have? Is there amongst them a Lazear, who allowed a mosquito that had bitten a yellow fever patient to bite him and give him yellow fever which caused his death, in order to prove that the disease is transmitted by a mosquito? I defy anybody to name a single beneficial discovery in medicine by any of the hordes of cultists, faith healers, drugless practitioners, who by advertising have spread abroad tales of their "marvelous knowledge and skill."

If the state believes in this chiropractic business then why don't they be consistent and do away with the State Board of Health? Let down the bars and it will make more work for the legitimate physician, and he will help whether he is paid for his services or not. Of patients in general hospitals in 1923, according to the U. S. Census, 31 per cent paid nothing. These are treated for nothing by physicians, as are many in their work outside hospitals. The doctor's duty, however, is the same as the duty of any other citizen; no more, no less. If the people want lower standards and less protection, many of us are beginning to feel that they should have them, although they will pay for them and the price will be dear. One cannot, however, help feeling sorry for those who can and deserve to be helped, and for concern about what his own children will be exposed to. It is to the physician that the people turn when disease exists or threatens to exist, and he still feels it his duty to do what he can to see that health is obtained and preserved even if he does meet with obstruction where he should receive help for the public welfare.

#### PHYSICIANS' EXCHANGE

Salaried appointments for Class A Physicians in all branches of the medical profession. Let us put you in touch with the best man for your opening. Our nationwide connections enable us to give superior service. Aznoes National Physicians' Exchange, 30 No. Michigan, Chicago. Established 1896. Member the Chicago Association of Commerce.

#### Propaganda for Reform

Pariogen Tablets.—There has grown up, during the past four or five years, a huge business in the sale of antiseptics and germicides, real or alleged, that are frankly purchased, if not obviously sold, for contraceptive purposes. The term contraceptive is not used in the advertisements; "feminine hygiene" takes its place. "Pariogen Tablets," marketed by American Drug and Chemical Company, of Minneapolis, have been advertised as the "new mode of personal hygiene." An advertisement stated "Pariogen Tablets may be carried anywhere in a purse, making hygienic measures possible almost anywhere, no other accessories or water being required." The advertising has stressed that the tablets are non-poisonous, but do not declare the composition of the tablets. Some six years ago a reading notice appeared in a medical journal from which it appears that the tablets are essentially tablets of chloramine, U. S. P. By selling these under a proprietary name as a nostrum of essentially secret composition, the company is able to get a price that is out of all proportion to the value of its product. (*Jour. A. M. A.*, February 7, 1931, p. 458.)

Death from Explosion of Mixture of Anesthetic Gases.—It has been two years since, at Evansville, Ind., a tank containing nitrous oxide exploded, killing an anesthetist. Last month a patient died on the operating table in Los Angeles because of the explosion of an anesthetic mixture. Yet the hazard from an explosion of anesthetics is probably less than that of fatally persistent hiccup. It has been pointed out that surgeons and anesthetists need far more to utilize means to prevent postoperative pneumonia than to worry over the hazards of explosions, except of course explosions due to carelessness. In the case of the Los Angeles accident, the patient was given nitrous oxide and oxygen, followed by ether. It has been pointed out repeatedly that a mixture of these gases is explosive. Explosions recorded heretofore appear to have been due to sparks from discharges of static electricity. Various committees of the American Medical Association have reported on precautions that are to be taken towards the prevention of such accidents. (*Jour. A. M. A.*, February 14, 1931, p. 530.)

Brinkley's Broadcasting Station.—The Federal Radio Commission refused to renew the broadcasting license of Station KFKB of Milford, Kansas, operated by John R. Brinkley, because it was operated mainly in the interest of Brinkley and his associates rather than in the interests of the public. Brinkley appealed the case to the courts but this appeal has been denied. (*Jour. A. M. A.*, February 14, 1931, p. 547.)

Pertussis Vaccines Omitted from N. N. R.—The Council on Pharmacy and Chemistry reports that pertussis bacillus vaccine was admitted to New and Nonofficial Remedies in 1914 on the basis of what appeared to be acceptable clinical evidence. In subsequent years, when vaccine therapy was at its height, pertussis bacillus vaccine was used extensively and yet critically controlled reports did not become available. In 1928 the Council voted to omit pertussis vaccines with the close of the longest period for which any one was accepted, unless in the meantime acceptable evidence for its usefulness in the prevention or treatment of whooping cough became available. No acceptable confirmatory evidence having become available, the Council voted to confirm its decision to omit from New and Nonofficial Remedies all pertussis vaccines. (*Jour. A. M. A.*, February 21, 1931, p. 613.)

# EDITORIAL

## DELAWARE STATE MEDICAL JOURNAL

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Vol. III      MARCH, 1931      No. 3

### THE CHICAGO CONGRESS

A scientific meeting is always stimulating, not only because the individual attending such a meeting learns about the latest advancements in his science, but also because of the enthusiasm which association with men leading in a profession arouses.

Unusually stimulating was the Annual Congress on Medical Education, Medical Licensure and Hospitals, held under the auspices of the American Medical Association, at the Palmer House in Chicago, February 16th to 18th of this year. One and one-half of the three days were allotted to psychiatric meetings. This does not seem out of proportion when one realizes that 324 persons out of 100,000 are confined in hospitals for mental and nervous diseases compared to 192 in general hospitals. 45.7% of all hospital beds are used for mental and nervous cases, and 95.4% of these are occupied. 40% of all people applying to public clinics for aid are suffering from

some form of mental or nervous diseases. In considering these conditions, it can readily be realized why a considerable part of the time was spent in discussing the psychiatric training of medical students so that they will have a clearer practical knowledge of these diseases. It is inevitable that, considering the high percentage of the incidence of these conditions, they should play an important part in the practice of every physician. With the entirely inadequate courses which are offered by our medical schools, it is no wonder that these patients wander from doctor to doctor, too unstable to remain long with one man, with the true nature of their conditions remaining unrecognized.

With a short course dealing mostly with terminology and without any requirements in regard to the fundamentals, the average medical student is poorly equipped to recognize the neurotic conditions as they arise. It is only when he starts his practice that he obtains any concept of the importance of these conditions. For this very reason also, psychiatrists are rare, for the student receives no incentive to continue in this specialty.

Some time was spent in discussing the requirements of the various medical schools. Here, as everywhere, there was a wide divergence of opinions. Granted that a college course is not essential to the full understanding of a medical course, yet it would seem essential that physicians have a cultural background. But it is also true that when college was first a requisite to entrance in a medical school, college education was comparative to a modern high school training.

Requirements for eligibility to institutional work, salaries, and hospital standardization were discussed. Particularly in considering state institutions were the requirements of the resident physician considered of supreme importance, this being partly due to the lack of adequate training in the medical schools. There is a general tendency to raise the standards for all specialties. With this, there is also a tendency to raise the requirements for hospitals. All institutions wish to be recognized by the American College of Surgeons, and by the American Medical Association. State hospitals wish to acquire the standards as outlined by the American Psychiatric Association. The raising of these standards spurs the in-

sitions to greater effort to reach the desired level. This standardization also keeps the hospitals from becoming slack, since it is necessary that they maintain a certain degree of efficiency.

To be recognized, a hospital must be a teaching institution, and the importance of this is based on the fact that it is here the young doctors receive their internship—their practical experience—after which they are supposedly ready to take over the trust of a human life. The community is ready to depend upon their wisdom and judgment. Let the hospitals assume the burden of preparing them to carry this trust in the way it should be carried.

The principal papers were as follows:

Mental Health as a National Problem. Hon. Ray Lyman Wilbur, M. D., Secretary of the Interior, and Chairman of the Council on Medical Education and Hospitals, American Medical Association, Washington, D. C.

Federal Activities in the Care of the Mentally Ill. Walter L. Treadway, M. D., Assistant Surgeon General, Division of Mental Hygiene, U. S. P. H. S., Washington, D. C.

Role of the State Hospital in Mental Hygiene. J. Allen Jackson, M. D., Superintendent, Danville State Hospital, Danville, Pa.

Role of Community Clinics in Mental Hygiene. George S. Stevenson, M. D., Director, Division on Community Clinics, the National Committee for Mental Hygiene, New York.

Child Guidance Clinics. Lawson G. Lowrey, M. D., Director, Institute for Child Guidance, New York.

The Present Trend of Medical Education. Charles P. Emerson, M. D., Dean of Indiana University School of Medicine, Indianapolis, Ind.

Some Present-Day Trends in the Teaching of Psychiatry. Franklin G. Ebaugh, M. D., Director, Colorado Psychopathic Hospital, Denver, Col.

The Training of the Specialist in Psychiatry. C. Macfie Campbell, M. D., Director, Boston Psychopathic Hospital, Boston, Mass.

Psychiatry and the General Practitioner. H. Douglas Singer, M. D., Professor of Psychiatry, University of Illinois College of Medicine, Chicago, Ill.

The Preliminary Education of the Clinical Specialist. William J. Mayo, M. D., Mayo Clinic, Rochester, Minn.

Some "Whats" and "Whys" in Graduate Medical Education. G. H. Meeker, Sc. D., Dean, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa.

The various meetings were presided over by W. M. English, M. D., President of the American Psychiatric Association, Brockville, Ont.;

William A. White, M. D., Superintendent, Saint Elizabeth's Hospital, Washington, D. C.;

Henry S. Houghton, M. D., Dean, State University of Iowa College of Medicine, Iowa City, Iowa;

Adolph Meyer, M. D., Psychiatrist-in-Chief, Johns Hopkins Hospital, Baltimore, Md.;

E. P. Lyon, M. D., Dean of the University of Minnesota Medical School, Minneapolis, Minn.;

Charles B. Pinkham, M. D., President, Federation of State Medical Boards of the United States, Sacramento, Cal.;

Lewis A. Sexton, M. D., President of the American Hospital Association, Hartford, Conn.;

C. C. Bass, M. D., Dean of the Tulane University of Louisiana School of Medicine, New Orleans, La.;

Isaac A. Abt, M. D., Professor of Pediatrics, Northwestern University Medical School, Chicago, Ill.;

Harold Rypins, M. D., President-elect of the Feder-

tion of State Medical Boards of the United States, Albany, N. Y.;

Harry E. Mock, M. D., President, American Conference on Hospital Service, Chicago, Ill.;

Merritte W. Ireland, M. D., Surgeon General of the U. S. Army, and member of the Council on Medical Education and Hospitals, American Medical Association, Washington, D. C.

#### CHIROPRACTORS INVADE DOVER

In this issue is an article by the secretary of the State Medical Society which defines chiropractic, and which, with certain questions and answers in cross-examination form, it is hard to conceive that anyone with a higher intelligence than a moron would not be able to understand correctly. It is not necessary of course to educate physicians in this subject, because they all know how preposterous the whole idea is. To read some of the answers in cross-examinations is like reading a comic. Take the testimony of "Dr." B. J. Palmer on his interpretation and treatment of lousiness.

"Q. What, if anything, did you teach your students, during the years in question, as to the proper course to be pursued in a case of lice or anything of that character?

A. The chiropractic philosophy constantly imbues the same fundamental thought all external or internal germs, or other scavengers, are scavengers strictly in the sense that they live upon body waste and dead matters; the purpose of chiropractic adjustment being to make normal tissue that there would be no waste matter upon which any kind of scavenger could live either inside or outside of the body.

Q. And what particular vertebra did you teach them to adjust for lice on the head, if any?

A. The adjustment for any scavenger would depend entirely upon where that scavenger was.

Q. Well, take scavengers such as lice on the head; what vertebra would you adjust for those?

A. In the cervical region.

Q. And suppose you had body lice in the groin, what vertebra would you adjust for those?

A. In the lumbar region.

Q. Any particular vertebra?

A. It would depend entirely upon the particular one subluxated. It might fluctuate in different individuals.

Q. What fluctuations would there be there?

A. From the second to the fifth, inclusive; it could be any one."

One would think, that if the cootie should be a particularly lively one and hopped around a good deal, it would keep the chiropractor pretty busily hopping to get the right vertebra.

The point is this Chiropractic Bill went through the House by a thirty-three to two vote, and through the Senate with but two negative votes. Why was such a thing done by a group of people elected to protect and serve the interests of the state? A number of explanations

might be made. If they were ignorant of the subject then it would seem, before creating such a health act, those responsible for the results would consult the State Medical Society, or the State Board of Health, which latter would conflict with the claims and practices of chiropractic, before legalizing such a practice. The opinion of many was that there was no use to try to do anything about it because of the course of actions already decided upon by a majority of the legislature. Even though we might not have made the situation as clear as we should, and important facts and circumstances were not brought out and emphasized, the truth of the matter is the action of the legislature was dangerous. It looks as though we were dealing with at least some who, as Prof. Councilman of Harvard says, "are either ignorant or have a peculiar order of mind which renders them incapable of sane judgment." Mr. Samuel Untermeyer in a recent address at Los Angeles, in referring to the American people as having carelessly entrusted the natural resources of the country and its government to ignorant and incompetent men, made this remark: "I venture to assert that on the whole a more generally untrained body of national, state and local legislators and one of lower intellectual standards is not to be found in any civilized country on earth." We have our opinion and others are entitled to theirs, but one thing is sure, such action by any body of legislators does not entitle them to any great effort in attempt to absolve them from Mr. Untermeyer's classification.

The state has reason to be thankful that we have a Governor who has intelligence enough to understand chiropractic and courage enough to act in the interest of his fellow citizens of the commonwealth. We may not have a governor of that type at another time.

What can be done to guard the state against dangerous inroads by cultists and faddists? It is surprising how many of the more intelligent, better educated and successful individuals know so little about such things as chiropractic—those who can see and are willing to see when shown. As for some of the others we feel sometimes, what is the use! But of course from those who have received more, more is expected. So the medical profession should see to it that the public become better informed in medical matters. They should be informed of the principal object in the organization of the county and state

societies, and of the American Medical Association. They should be made to realize that any methods or means used in the treatment of the sick is practicing medicine, and that all who follow the practice as a profession should be qualified under the same law in order that the people be protected from the incompetent and unscrupulous. They should be educated to realize that anatomy, physiology, and pathology are the foundations of medicine, and that all who treat the sick as a profession should be compelled to meet the same requirements in these subjects. The public should also be educated against the perils of anti-vaccinationists and anti-vivisectionists, because before we know it some of them will be descending in force upon our legislature.

If one cult is recognized others will appear and the best way to handle them and the best way to guard against them is for the state to have a Basic Science Law. It would perhaps be better, as Dr. Charles Mayo has suggested, if we could have "national educational requirements for all people who are permitted to treat disease, perform operations, and protect the public health in general. In fact, there should be no examination on methods of treatment, but the examinations should be on such fundamental branches as physiology, anatomy, chemistry, and pathology; that a knowledge of disease be possible in order that it may be diagnosed, especially the contagious and infectious diseases, for the protection of the public health. This knowledge would harm no one, even if he practiced Christian Science."

#### EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital. We invite and urge you to use this Service.

It is absolutely *free* to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve you.

What *are* we going to do with our ex-presidents (of the A. M. A.) and other medical big wigs when they reach that stage where they are in possession of either fame or fortune or both, and then have thrust upon them some new and unaccustomed power? Especially if that power be political, must some curb be found against the increasing abuse of that power? The latest

sample of this is to be found in a letter published in the *Journal of the American Medical Association* for March 7, 1931, and concerns Dr. Ray L. Wilbur, former president of the A. M. A., present president of the Stanford University, on leave of absence, and now serving as Secretary of the Interior in the Hoover cabinet. Read it and weep.

#### THE COFFEY-HUMBER PATENT

*To the Editor:*—Referring to Dr. MacDonald's letter in THE JOURNAL, January 10, may I suggest that Dr. MacDonald procure from the Chemical Foundation the complete photostated file of the Coffey-Humber patent transaction. He will see that the patent office in April, 1930, refused to grant the patent in a masterly report on Coffey's preposterous claims, which were annihilated one by one by a patent examiner who dealt with them in a truly scientific fashion. He will also see (and it may surprise and shock him as much as it did me) that Ray Lyman Wilbur wrote the Patent Office requesting specially expeditious handling of the matter on account of his responsibility for the medical care of the American Indian and the Alaskan Eskimos. His next interesting discovery will be that Dr. Coffey's claims were resubmitted, July 1, 1930, and the patent granted on July 2—an example of speed and efficiency which is a true tribute to the great Engineer and his strong, silent way of getting things done.

JOHN M. REHFISCH, M. D., San Francisco.  
J. A. M. A., March 7, 1931.

Our editorial last month on collections was timely, and referred in general terms to the so-called Memphis Plan. By a coincidence a fairly complete survey of the Memphis Plan was published almost simultaneously in the February issue of *Medical Economics*. The article, entitled "Credit Wheels," by Harold S. Stevens, is well worth some thought.

The report of the Board of Health of the State of Delaware for the two-year period ending June 30, 1930, has recently been published. This is the best report this Board has ever submitted, in that it contains more data, much better graphs, and a keener analysis of statistics. With all due respect to the previous Boards, we are convinced the present Board made a most happy selection of executive secretary when it selected Dr. Jost for that position. Dr. Jost is an able administrator, an indefatigable worker, by all odds the best statistician this state ever had in any department, and above all, he is a kindly and courteous gentleman. The physicians of the state would do well to know him and his department better.

Editor Bulson, of the *Journal of the Indiana State Medical Association*, complains that some

of the other state journals appropriate some of his editorials and editorial notes without giving credit to the original source. The trouble with Dr. Bulson is that his "stuff" is so good that every editor wants it, yet that is no excuse for depriving him of the credit of originality. He conducts unquestionably the snappiest editorial department to be found in any of the state medical journals, and we ourselves have received many suggestions from it. However, we have no recollection of ever indulging in body-snatching, from him or from anyone else, without stating our source. If we have at any time failed in this, our apologies herewith; and our earnest petition that he refrain from the "gall and wormwood"—just write us a letter.

Another one of Dr. Bulson's woes is identical with ours. Indiana has a "bone dry law," akin to the Klair Law of Delaware, concerning which he says, in his February (1931) issue:

Well, Indiana's "bone dry law" may not be repealed, but we do think that it could be modified to the extent of permitting licensed physicians to prescribe alcoholic beverages in case of sickness when in the judgment of the physician such treatment is indicated. We admit that any medical man can obtain alcoholic beverages in any city or town in Indiana without much difficulty, but why not make it legal for him to obtain those supplies when they are to be used for therapeutic purposes?

This applies exactly to Delaware, whose legislature, now in session, has before it two or three bills authorizing physicians to prescribe alcoholic medicinals. It is rumored that none of them has much chance of being passed, though the Governor recommended it in his message. In our common misery, says Editor Bird to Editor Bulson: Here's hoping.

Political expediency that is purchased with public confidence is political suicide.—From the inaugural address of Governor Buck.

Thanks, Governor. Those words of wisdom apply equally well to the chiropractic bill, which you so justly vetoed. If ever public confidence was flouted not by political expediency but by political pressure it was flouted in the passage of this chiro bill. Concerning the alleged railroading of this bill through both houses by such huge majorities, reputedly at the crack of the whip in the hands of a lobbyist who aspires to political domination, there were current some ugly rumors which should be investigated by the proper authorities. Yes, Governor, thanks again; in vetoing this bill you have rendered the state a great service.

## DELAWARE PHARMACEUTICAL SOCIETY

A joint meeting of the members of the State Boards of Pharmacy and of the delegates of the Faculties of Colleges of Pharmacy in N. A. B. P. District Number Two, (N. Y., N. J., Pa., Del., Md., D. C.), was held Monday and Tuesday, March 9th and 10th, 1931, at the Hotel duPont-Biltmore, Wilmington.

The program for the Monday morning session included some introductory remarks by Vice-President Lloyd N. Richardson for the Boards, and Vice-President Hugh C. Muldoon for the Colleges, followed by the remarks by President J. W. Sturmer, of the American Association of Colleges of Pharmacy.

At the Monday afternoon session the following papers were presented:

"A Supplemental Report by the Committee on Materia Medica"—Messrs. Mansfield, Walton, Wood, Taylor, and Lascoff.

"The Teaching of Theoretical Pharmacy"—W. Paul Briggs.

"How Practical is Theoretical Pharmacy?"—Robert L. Swain.

Discussion was opened by Messrs. Saalbach and Wise.

"The Importance of a Definite Technique in Teaching Pharmaceutical Arithmetic"—C. Leonard O'Connell.

"Pharmaceutical Mathematics"—L. L. Walton.

Discussion was opened by Messrs. Bradley and Wood.

"Should Pharmaco-dynamics be Included in the Regular Pharmacy Course?"—H. H. Rusby.

In the evening an entertainment, by the Q-S Club, was given.

At the Tuesday morning session the following papers were presented:

"Pharmaceutical Latin"—J. W. Sturmer.

"The Importance of Pharmaceutical Latin from the Examiners' Point of View"—Robt. P. Fischelis.

Discussion was opened by Messrs. Muldoon and Lascoff.

"The Advisability of Boards of Pharmacy Holding Examinations in Pharmaceutical Jurisprudence"—William C. Anderson.

"An Effort to Evaluate Practical Experience"—Maryland Board of Pharmacy.

This meeting was attended by about forty-seven delegates, representing the Boards of Phar-

macy of the States of New York, New Jersey, Pennsylvania, Delaware, Maryland, and of the District of Columbia. The following Colleges and Schools of Pharmacy were also represented: Brooklyn, Buffalo, Fordham, Columbia, Rutgers, Philadelphia, Temple, Maryland, Pittsburgh, Duquesne, Howard, and George Washington.

The discussion resulting from the reading of the various committee reports and individual papers shows that the schools and the boards are acting more and more in accord regarding what subjects in the curricula should be stressed. Professor W. Paul Briggs, of George Washington University, presented a very fine paper on "The Teaching of Theoretical Pharmacy," as did Mr. Robert L. Swain on the practical application of the same.

Pharmaceutical mathematics were treated upon at great length and in much detail by L. L. Walton, of the Pennsylvania Board. Professor C. Leonard O'Connell, Pittsburgh College of Pharmacy, in a chalk talk explained a very simple method of teaching pharmaceutical arithmetic.

Dr. H. H. Rusby in his paper titled "Should Pharmaco-dynamics be Included in the Regular Pharmacy Course?" answered his own question with a very emphatic "No."

"Pharmaceutical Latin"—as she are wrote—was dwelt upon quite fully by Dean J. W. Sturmer, of the Philadelphia College of Pharmacy and Science.

The discussion following the reading of Dr. William C. Anderson's paper on "Pharmaceutical Jurisprudence" brought out the idea that it would be well for Boards of Pharmacy to give instruction in rather than examination upon laws either governing the practice of pharmacy or affecting the same in any respect.

The delegates and their ladies were entertained at dinner on Monday evening in the Club Room of the duPont-Biltmore, at which time a most enjoyable time was had by all. Short talks of a humorous character were made by several of those present including H. C. Christensen, president of the American Pharmaceutical Association, Dr. Horatio Wood, Dr. Hugh C. Muldoon, Lloyd N. Richardson, Dr. E. F. Kelley, A. C. Taylor, Robert L. Swain, Dr. John C. Krantz, Dr. Robert P. Fischelis, Dr. Wm. C. Anderson, Dr. E. G. Du Mez, and L. L. Walton. Walter L. Morgan acted as toastmaster. Music was furnished by Sanderson's Orchestra.

## WOMAN'S AUXILIARY

### Panoramic View of the Woman's Auxiliary to the A. M. A. in Four Articles

#### 2. North Central States

MRS. JAMES BLAKE

According to the Constitution and By-laws of the Auxiliary to the American Medical Association the organization program is carried on by the active work of the vice-presidents. Mrs. Southgate Leigh, of Norfolk, Va., is first vice-president and automatically chairman of organization. Due to her location on the map, the second vice-president finds herself interested in the destinies of the north central group of states.

Looking backward, with pleasant memories to Detroit, and forward with delightful anticipations to Philadelphia, we find this group of states all doing something of common interest.

In the January *Journal of the Indiana State Medical Society*, the Auxiliary president stresses the importance of more constructive work on the part of her organized county groups. "Physicians' wives," she says, in her New Year's address, "hold an enviable position in being privileged to have a part in a world-wide health program, and I would urge every physician's wife to bring before other women dependable knowledge, and a just appreciation of the real spirit and purpose and actual achievements of the medical profession." So from Indiana we know we are to have constructive work during this year. Physicians as a class are not prone to participate in legislative matters, but when four distinctly separate bills, which affect the profession, directly, are presented during one session of a state's legislature, it is time to be up and doing. Such is Indiana's situation this year, and the doctors of the 7th district have thought it worth while to instruct their Auxiliary members on these subjects, that their influence may be properly used. The Indiana *Journal* never fails to give the Auxiliary space, and it is little wonder the Indiana women are up and coming, when they have such editorial notes to enlighten and guide them in their constructive program work, as one finds in this same *Journal*.

Kansas is slowly getting a few things accomplished. A world-wide depression has rendered prophets quite fameless abroad as well as at home, but the doctor's wife in Kansas is coming into her own, and we prophesy that the Auxiliary will climb to the top, due to the indomitable spirit of the leaders in that state.

In Illinois the motto might well read: "Builders we are, and builders we must ever be; builders, not in stone that shelters life, but builders in life." We find good constructive programs, of well-balanced educational value; we find a *Journal* ever ready to broadcast Auxiliary news; and best of all we find a healthy organization line-up, and an Advisory Board from their Medical Society. Several of their county groups are having their members get busy with the "health audit program." One project of worthy mention comes from Vermillion County, on the Eastern boundary of the state. The county Auxiliary put on the health institute in Danville last November. A member from every agency in the county working out any kind of health program was included in the personnel of the speakers. It was for just one day, but it was worth 365 as a rouser for Auxiliary work. It really was sort of Christmas seal campaign opening, a get-together of club women and P. T. A. groups in the county. And what a wise idea for a medical Auxiliary to have the head lines in the plans for such a "health day"!

Wisconsin, Iowa, and South Dakota are among the latest states to join the national Auxiliary. Organization is the keynote for their work, and the national study envelopes are offered as program material. Right now, if the modern doctor's wife needs to get one thing more than another from her organization, it is the knowledge of what is going on in this world, especially the world of medicine. Women are discriminating more carefully in the clubs they are joining. They are asking what membership will mean to them, what they will get out of it. For that reason the subjects for study should be more carefully chosen, and the roll call should be made to count for something more than jokes and quotations from forgotten poets. It isn't a pleasant feeling for a busy mother who rides miles to a meeting to say when it is all over, "I can't say I know any more now than when I started." And so we find these three states getting themselves established on a firm foundation, with the national program envelopes scattered far and wide to aid and encourage Auxiliary members, already in, and prospective members.

Montana and North Dakota are debating pro-and-con, but as Mrs. Hoxie said in her Detroit report, "I believe it will be a mistake from now on to organize a new state, unless it appears reasonably certain that there is interest enough

among the doctors who want the Auxiliary, so they will foster it and stand back of it." And so we leave Montana half-hearted about forming an Auxiliary, and North Dakota in the air.

We find Michigan giving intelligent co-operation with state and county officials. Women, like men, are interested in the improvement of civic affairs and healthful living and are realizing that they need to be armed with a definite knowledge of health laws and public health practices.

Missouri is in a very healthy condition. We find that Mrs. A. B. McGlothan, the president-elect of the Woman's Auxiliary to the American Medical Association, attended President Hoover's White House Conference for Child Health and Protection, which was held in Washington last month. Mrs. G. H. Hoxie, the president for last year, also attended.

Mrs. A. W. McAlester tells us the women of Missouri are finding the study envelopes published by the Education Committee of the Woman's Auxiliary to the American Medical Association, most interesting and instructive. The studies on "Common Defects in Children", and on "Diphtheria", "Small Pox", and "Typhoid Fever" were recommended by the Department of Health in the Missouri Branch, National Congress of Parents and Teachers, for use on parent-teacher programs. Eight hundred copies of each were distributed for use in parent-teacher units. Three hundred were requested and supplied for use in parent education classes. Requests are constantly coming in for additional copies of the studies for use by teachers and parent-teacher units. The Department of Public Information of the Extension Division of the University of Missouri is including these studies in its suggested programs for clubs in the Missouri Federation of Women's Clubs, and P. T. A. programs. This department requested back numbers of Hygeia for use in such programs. Three hundred copies of Hygeia were supplied by women in the state and by the circulation manager, and are being extensively used in club programs. The Missouri chairman of Public Relations is planning to have a copy of each of the studies "Common Defects in Children" and "Communicable Disease Control" sent to each county school superintendent in the state. Several of the county auxiliaries are using the study envelopes in their programs.

Mrs. M. P. Overholser, of Harrisonville, Mo., has been appointed chairman of public relations

in the Missouri Auxiliary. This Auxiliary maintains a scholarship for a medical student, per capita quotas being assigned to each county Auxiliary. They also have sent in 30% of the total number of Hygeia subscriptions recorded from all Auxiliaries from January 1, 1930, to January 1, 1931. Some county Auxiliaries provide Hygeia for all their teachers. Among these are Buchanan, Gentry, and Lafayette. Cape Girardeau County Auxiliary has just finished paying a \$1000 pledge to a hospital in the city, and is now ready for another kind of work. They are a live group and certainly work hard to be able to accomplish so many wonderful worth-while things.

Minnesota, the North Star State, has had a busy and successful year on organization. The president and organization chairman have visited over the state and planned meetings and educational programs with many county groups. In October the International Medical Assembly met in Minneapolis, and at this time the Hennepin County Auxiliary celebrated its twentieth anniversary, by being hostess for five days to the visiting doctors' wives. A great many social affairs and an educational day, which included a speaker on public health, were features. Hennepin County is having a year with a definite program. Each month a speaker is scheduled, and one meeting during the year is reciprocity day and each Auxiliary in the state is invited to send visitors. This group features philanthropic work for tuberculous patients at Glen Lake, and do much for the library at the sanatorium. They have helped the Medical Society furnish their library and club rooms, spending \$1000.

Ramsey County does much the same work. They have a scholarship fund for medical students. St. Louis County is noted for work in the public relations field. The state medical journal gives a page to Auxiliary news. One of the other counties takes care of a nurse's scholarship. The Minnesota Auxiliary has a splendid Advisory Board. The president was one of the speakers on the program for the Annual Conference of Secretaries of the Component Societies of the Minnesota State Medical Association, which was held in St. Paul in February. This is the first time the Auxiliary has been asked to take part in this annual affair. Mrs. Hesselgrave's subject was, "Uses of the Auxiliary."

And so, closing my review of the work of the north central group of states, may I say again:

"Builders we are, and builders we must ever be;  
Builders, not in stone that shelters life, but  
Builders in life,"  
ever remembering the future of the world for  
generations to come depends upon what we *think*  
and *will* and *do* today.

On February 10, the Philadelphia County Medical Auxiliary invited the Woman's Auxiliaries of Delaware and New Jersey to be their guests at their monthly meeting. Mrs. Odenott, president of the Philadelphia County Auxiliary, greeted us very cordially and expressed the hope that in meeting together frequently the Woman's Auxiliaries might strengthen their cause and enlarge their friendships.

Mrs. Tomlinson, of Delaware, Mrs. Hunter, of New Jersey, and Mrs. Baldwin, president of the Pennsylvania State Federation of Women's Clubs, were the next speakers, after which Mrs. Walter Jackson Freeman, general chairman of the National Convention of Auxiliaries, outlined some of the meetings and entertainments scheduled for the convention period. Mrs. Freeman's talk indicated that she had been doing a great deal of work on the convention plans.

The chief speaker of the afternoon was Dr. Doan, of Philadelphia, whose topic was "The Trail of the Poppy." He traced the history of the drugs derived from the poppy, stressing the fact that opium has played an important part in the homes and morals of every country, and is an important factor in world politics. He pointed out that the realm of literature has also been influenced by the discovery of opium, as illustrated in the career of many authors or poets, notably Poe, Coleridge, and De Quincy. Dr. Doan's conclusion was that a sane education of the masses, with help from the press, the physicians, and the police, seems to be necessary to combat the evils of this powerful drug.

### MISCELLANEOUS Private Group Clinics

A study of private group clinics in the United States made for the Committee on the Costs of Medical Care by C. Rufus Rorem has been issued as Publication No. 8 of the Committee.

There are approximately 150 such clinics, with a total medical personnel of about 2,000. They represent a comparatively recent development in medical practice, most of those now in existence having been organized since the World War. Almost none are to be found in the east-

ern states; the majority are in the middle west.

The average capital investment in plant and equipment, excluding hospital facilities, was \$10,000 per practitioner in seven clinics which supplied information on this point. The average capital investment in medical equipment and apparatus was \$3,600 for 217 practitioners in nineteen clinics supplying information.

There are two general classes of clinic practitioners: those who share in the ownership of the clinic assets and participate in its profits; those employed solely on a salaried basis. The former group is composed of relatively older men. Data from 34 clinics revealed an average of 20 years since graduation from medical school for the "owners" and 8 years since graduation for the "salaried" physicians.

Of 415 clinic physicians listed in the 1929 American Medical Directory, 337 were members of the American Medical Association. Clinic physicians were found to belong to specialized associations to a greater extent than independent practitioners in the same communities, a result, in part, of the fact that a larger percentage of clinic members are specialists.

The distribution of the various specialties among 50 clinics was as follows, indicating those groups in which each specialty was represented by at least one practitioner: internal medicine, 50; surgery, 50; eye, ear, nose and throat, 46; obstetrics, 37; urology, 35; pediatrics, 30; xray, 27; pathology, 26; dentistry, 17; gynecology, 17.

Perhaps the most striking development in group clinic practice is the "business office," a separate department under a lay business manager who is an employee and whose duties and responsibilities are determined by the clinic physicians. Financial dealings with patients usually rest in the hands of these business managers, physicians wishing, it appears, to have as little of these as possible, although their wishes with regard to the establishment of fees prevail.

According to statements by forty-two clinic managers, clinic fees appear to be regarded by the general public as neither higher nor lower than those of local doctors in private practice. Twenty-one managers say their fees are "about the same," eight say they are "higher" and thirteen that they are "lower" than those of independent practitioners.

The practice of the typical private group clinic is essentially local. The majority of patients, managers say, are persons of moderate means,

with a considerable number who might be classed as well-to-do, and a few others who are very poor.

Approximately one-fourth of 60,000 patients served in fourteen clinics in 1929 were hospitalized during diagnosis or therapy. Approximately 10 per cent of 41,000 patients in ten clinics were treated by major surgery. In twenty-one clinics, 528,000 visits by patients were received by 215 members, an average of 2,459 per practitioner.

Data were received from twenty-seven clinics regarding gross and net income per practitioner. Gross incomes ranged from \$10,708 to \$25,606, and net incomes from \$5,960 to \$17,449. The average gross income for each of the 314 practitioners was \$14,908, and the average net income, \$9,747.

The conclusions drawn by Mr. Rorem from his study embrace the following:

"I. Group clinics are in direct economic competition for the medical service which constitutes the major portion of the practice of independent practitioners.

"II. The economic success of group practice depends upon the degree of utilization of the capital investment and of the time of the individual practitioners. The medical service of a clinic cannot usually be adjusted to the convenience of a patient as easily as can the services of an independent practitioner. Where, however, a patient requires the services of several specialists he can probably obtain treatment with less inconvenience and expense at the office of a clinic than from separate practitioners.

"III. The members of private group clinics generally make an effort to maintain a personal relationship between physician and patient.

"IV. The volume of medical service carried on by a private group clinic makes possible the establishment of a specified maximum fee for difficult individual cases and for complete annual service to groups of patients.

"V. Clinics have in general provided net incomes and working conditions for physicians which make possible the continued development of group practice. The removal of financial and administrative responsibilities from the individual clinic practitioner has made him more completely available for professional service, and has, in some clinics, increased his opportunities for scientific research and development.

"VI. The employment of business managers has usually resulted in increased administrative

economy and efficiency. The establishment both of fees and of collection policies is based upon financial data obtained through conventional business methods. Inasmuch as the financial status of a clinic patient is usually investigated, group clinics probably perform less 'free service' than would an equal number of independent practitioners doing the same volume of work.

"VII. Private group clinics, through their available equipment and their co-ordination of medical specialists, are in a position to fulfill the basic requirements of good medical care with economies from which either or both the clinic members and the public may benefit.

#### **"Good" and "Bad" Books**

It is often asserted in these days of kaleidoscopic change that modern machinery, in a psychological sense, is turning masses of mankind into mobs of irresponsible robots. That there is in this fact great danger seems to be true, for it is scientifically demonstrable that the IQ of men who are acting and thinking (if at all) as a herd, rather than as individuals, can be no higher than that of the "greatest" morons of them all. And yet, despite hard times, who can deny that one of the results of the use of modern machinery and mass production is the extraordinary dissemination of books? Who can mention any other period in the world's history when books of all kinds were so cheap in price, and so easily obtained in practically all parts of the globe?

True, books either "good" or "bad" (whatever such terms may mean), may or may not add to the stature of a nation or a people; yet it is reasonable to assume that the universal dissemination of ideas, diverse though they be, *does!* Is it not also rational to believe that every really constructive book is another rung in the ladder of human progress?

"Good" books having been mentioned seems to connote that there are "bad" books. There are no bad books; all books are good! That, it may be challenged, is a rather broad statement. It is, but it is true. Let a well-read individual pause but a moment, and there can be recalled more than a few "bad" books which if they had never been written the world might never have had any books at all. The Hebrew Bible and the Christian Bible are two such books. To millions of folk, just as sensible as either Jews or Christians, both books were, are, and will continue to be "bad." *Both* are good—if for no other reason than that the one contains the

twenty-third psalm of David, and the other the Sermon on the Mount.

What excuse, one may ask, is there for the modern "sex" novel? Those which, with a sly smirk, try to be as dirty and as apologetic for perversions as they dare? Bad? Suppress them? No, not at all, for even such books are not intrinsically bad. Their smut and filth are magnified only to the degree of the pornographic desires of those who read them. To some the writings of a Boccaccio mean a treasure of Italian literature of the period when written; to others such classics mean nothing more than a mine for filth. "To the pure all is pure." No decent reader buys the current smut, and if a buyer wants smut no amount of legislation can make him decent. Why fume and fuss?—or worry?

Possibly, the best type of book now being written is that anathema to our current crop of evangelical parsons. Books that question all other books. Books that are anarchial just for fun. Surely, such books serve to bring balance to over-balanced heads, justify the existence of thought, help to clarify muddy thinking, and assist in removing from the burden of life the ever-increasing load of pretense, fraud, and false dignities that civilization has entailed upon us.—*Kalends.*

### Propaganda for Reform

Avesan (H) Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that Avesan (H), according to the Avesan Chemical Co., Los Angeles, is "Indicated in tuberculosis, asthma, bronchitis and bronchiectasis" and stated to be "Effective in minor disturbances of the respiratory organs." The product is supplied in ampules and is administered subcutaneously. It is stated to be "a purely chemo-therapeutic product" which is "composed of formic acid, sodium nucleinate, camphor, allyl sulphide and chlorophyl with traces of salicin and sulphuric ether." After considering the available evidence and information, the Council declared Avesan (H) inadmissible to New and Non-official Remedies because no acceptable evidence for the efficacy and rationality is presented, because unwarranted claims are made, and because no evidence was supplied to show that the composition and uniformity of the preparation are adequately controlled. (*Jour. A. M. A.*, January 3, 1931, p. 39.)

**First Aid by the Manufacturer.**—Doctors received during the Christmas season a copy of the pamphlet entitled "First Aid and Emergencies," prepared by McKesson and Robbins for circulation to the public. It is not surprising to find from consultation of this pamphlet that first aid covers a wide variety of conditions and that apparently McKesson and Robbins have developed something for each of these conditions. Thus, anemia is listed among the conditions demanding first aid and the patient is given full instructions for its control. In addition, biliousness and liver trouble, Bright's disease, diabetes, eczema, gout, rheumatism and tuberculosis are among the conditions demanding first aid. True, the book mentions in various places the desirability of calling a physician, but the patient is encouraged to take a chance. This pamphlet represents one of the worst

phases of proprietary medicine business. (*Jour. A. M. A.*, January 3, 1931, p. 44.)

**More Misbranded nostrums.**—The following products have been the subject of prosecution by the Food and Drug Administration of the U. S. Department of Agriculture which enforces the Federal Food and Drugs Act: Antikamnia and Codeine Tablets (Antikamnia Remedy Co.), each containing 2.88 grains of acetanilid with caffeine, sodium bicarbonate and a small amount of codeine. Ak-No-Mor (A. G. Luebert), capsules containing 3 grains acetphenetidin, some acetylsalicylic acid and caffeine. Sargon (Sargon Laboratories), an alcohol-water solution of sugar, glycerin, extract of ox gall, a bitter drug, small amount of an iron compound, sodium citrate and caffeine. Gauvin's Headache Wafers (J. A. E. Gauvin), containing acetanilid and sodium bicarbonate. Hygem (Vita-Bac Corporation, Bloomfield Laboratories), consisting essentially of an emulsion of mineral oil, a small amount of casein-like material and water, flavored with peppermint oil and containing no viable acidophilus bacilli. Now (R. D. Coulson), consisting essentially of small amounts of menthol, camphor, oil of eucalyptus, licorice, alcohol, glycerin and water. Acquin (Clausen-Zoller Co.), containing acetphenetidin, acetylsalicylic acid and starch. (*Jour. A. M. A.*, January 3, 1931, p. 57.)

**The "Smeaton Way" Eyedrops.**—A relatively insignificant piece of medical swindling has recently been put to a stop by the postal authorities, through the issuance of a fraud order against Smeaton Way, Vincennes, Indiana. "Smeaton Way" was the name under which William D. H. Smeaton was selling through the mails a preparation called "Itsgone-Eyedrops" which he claimed was a cure for all known eye diseases and even blindness. The "eyedrops" were made out of honey, egg yolk, melted butter and water. (*Jour. A. M. A.*, January 3, 1931, p. 57.)

**Treatment of Cough After Bronchitis.**—Children who cough should not be permitted to attend school. If the child has fever, it should be kept in bed. Warmth, as uniform as possible, is the prime requisite in the treatment of colds and acute coughs. The chief of all expectorants is water: without it most medicinal expectorants fail and, with an abundance of it, they may not be required. Nevertheless, they probably contribute, when wisely used, to a speedier evolution of the various stages of bronchitis and to a more rapid recovery. The salines, chief among them ammonium chloride and sodium citrate, head the list of agents that may reasonably be expected to be of use in "loosening up" a cough, provided they are given freely, frequently and with plenty of fluid. Iodide, the most powerful of the saline expectorants, should not be employed until the acute stage is well over. When the cough is "loose," aromatics may be of value such as terpin hydrate and creosote. A cough that hangs on is not so much an indication for medicine as a challenge to determine why it does. (*Jour. A. M. A.*, January 3, 1931, p. 61.)

**Kotex.**—Because of inquiries received in regard to the nature of the deodorant present in the widely-advertised sanitary napkin, Kotex, the A. M. A. Chemical Laboratory examined the product. A specimen was labeled "Genuine Kotex Deodorized." An enclosed circular contained the statement: "Kotex is odor-proof. A mild, pure, safe antiseptic removes any danger of offense during the use of Kotex." The Laboratory found the Kotex pads to contain an amount of boric acid which is too small to be considered of value as a deodorant. (*Jour. A. M. A.*, January 17, 1931, p. 193.)

**The Hormone of the Adrenal Cortex.**—The Swingle-Pfiffner cortical hormone "extract" has been tested in cases of Addison's disease at the Mayo Clinic. Hartman, Brownell and Hartman also have been able to prepare an extract of the adrenal cortex that will prolong the lives of adrenalectomized animals indefinitely. They also have revived a patient with Addison's disease having a systolic blood pressure of 50 mm. and a pulse of 120 a minute by the use of their preparation of the hormone,

for which they propose the name Cortin. "Cortin" administered by mouth appears to give little or no benefit. It is best administered subcutaneously except in circulatory failure in which absorption is greatly reduced; then intravenous injection is employed. One may soon confidently expect the relief of the dire Addison's disease by the cortical hormone. (*Jour. A. M. A.*, January 24, 1931, p. 273.)

Prof. Paul C. Bragg.—Bragg's scheme is one that has become increasingly popular during the past few years with those who live by their wits. Ignoramus or swindlers with a flair for public speaking, confer on themselves ornate titles, create paper organizations with high-sounding names, and give what are described as "free lectures," but which are, in fact, merely pieces of come-on advertising for books and nostrums they have for sale and especially for so-called classes, for which a round charge is made. Bragg, like most of the ilk, works particularly along two lines: Food fads and sex. As another of his activities, Bragg, unfortunately for himself, went into the mail-order business. So long as the general level of intelligence remains what it is, systems like Bragg's are likely to remain profitable and safe. Using the mails to defraud, however, is another problem, and here is where Bragg made a tactical error. The postal authorities called on "Prof." Paul C. Bragg and his National Diet and Health Association of America, and his Bragg Laboratories, to show cause why a fraud order should not be issued against them. In due time such an order was issued. (*Jour. A. M. A.*, January 24, 1931, p. 288.)

**Antitoxins Against Scarlet Fever.**—No "one-shot" method of active immunization against scarlet fever has proved effective. The present status of the "ricinoleated antigens" is that they are of unestablished value. Their therapeutic action has not been proved. Scarlet fever ricinoleated antigen has been distributed by only one concern and that concern has recently discontinued the manufacture and distribution of ricinoleated antigen and is recalling it from the market. (*Jour. A. M. A.*, January 24, 1931, p. 292.)

**Thymophysin.**—Thymophysin is a foreign proprietary preparation of posterior pituitary and thymus claimed to be an oxytocic to accelerate normal delivery. In German periodicals, many articles have appeared praising the virtues of this mixture for use in the first and second stages of labor. Even in America a number of favorable but uncritical articles have been published. Erwin E. Nelson, of the University of Michigan, has reviewed the literature and carried out experimental investigations. He points out that the literature reveals no controlled evidence that the oxytocic or pressor activities of pituitary is altered by the addition of thymus extract. From his experimental work it appeared that, in this country at least, Thymophysin is incorrectly labeled as to its strength and no difference could be ascertained in the oxytocic or pressor activity of pituitary extract as compared with pituitary plus thymus extract. Nelson believes that the clinical results obtained from Thymophysin can be explained completely as due to small doses of pituitary extract. Thymophysin illustrates again the pitfalls awaiting those who are not thoroughly competent to undertake clinical evaluations but who arrive at conclusions based on the use of material the composition and activity of which have not first been scientifically determined. If physicians wish to undertake experimental clinical investigations with drugs, they will save time and protect the interest of the patient by limiting themselves to drugs whose chemistry and pharmacology has first been studied by the Council on Pharmacy and Chemistry. (*Jour. A. M. A.*, January 31, 1931, p. 359.)

**Misbranded or Adulterated Pharmaceuticals.**—During 1930 Notices of Judgment were issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture against the following pharmaceutical products that were found adulterated or misbranded: Aconite Tincture: shipped by the Blue Line

Chemical Co. Bulgarian Bacillus: tablets consigned or shipped by Fairchild Bros. & Foster. Pure living cultures of Bulgarian bacillus; shipped by the H. K. Mulford Co. Chloroform: shipped from Philadelphia (name of the company not given). Ergot: fluid extract shipped by the Blue Line Chemical Co.; fluid extract shipped by John Wyeth & Brother, Inc. Ether: shipped by American Solvents and Chemical Corporation; shipped by the J. T. Baker Chemical Co.; consigned by the Bayway Terminal (for the Harold Surgical Corporation); consigned or shipped by the Mallinckrodt Chemical Works; shipped by the Ohio Chemical & Manufacturing Co. Magnesium Citrate: shipped by the Citro Nesia Co., Inc.; shipped by the Henry P. Gilpin Co. Nux Vomica: shipped by the Blue Line Chemical Co. Opium: tincture shipped by the Blue Line Chemical Co. Quinine Sulphate Tablets: shipped by the Blue Line Chemical Co. Sassafras: oil shipped by the North Carolina Evergreen Co. Sodium Bicarbonate: shipped by James G. Good, Inc. Strychnine Sulphate Tablets: shipped by the Blue Line Chemical Co. (*Jour. A. M. A.*, January 31, 1931, p. 375.)

**Insurol in Diabetes.**—"Insurol" is a nostrum sold on the mail-order plan by a concern or concerns known, variously, as the Officinal Products, Inc., and New Life Products Co. Insurol has been described as a "triumph of Germany's biochemical laboratories" and, it is said, "combines insulin with the actual substance of the pancreas gland." In diabetes quackery, two elements are nearly always found: The first is that of requiring the person who uses the nostrum to adopt a diet that is low in carbohydrates. The second, and more common, is that of incorporating in the nostrum a diuretic. The average diabetic patient has some rough-and-ready method of estimating the amount of sugar that is excreted. In a report regarding the assumed effects from Insurol, there are many factors that may explain the alleged reduction of sugar. (*Jour. A. M. A.*, January 31, 1931, p. 378.)

### Hospitals, a Major Industry

Hospitals rank as the fifth industry in the country from the point of view of capital investment.

If the governing boards of hospitals will give attention to repair and construction they can benefit their own institutions and at the same time needfully increase employment.

These were two of the cardinal points stressed by Dr. Paul H. Fesler, superintendent of University of Minnesota Hospitals and president-elect of the American Hospital Association, in a radio talk on February 17, 1931. The talk was made from Station WBBM of the Columbia Broadcasting System and was under the auspices of the President's Emergency Committee for Employment, Colonel Arthur Woods, chairman.

He was the fourth of a series of important leaders in the institutional field to emphasize construction among non-profit-making institutions as a means to stimulate employment and business rehabilitation.

His address in full follows:

President Hoover's Emergency Committee for Employment has requested representatives of churches, schools, colleges and universities, hos-

pital and mental institutions to call attention to the opportunities for building programs for such institutions to aid the unemployed during the time of business depression.

The hospital is taken for granted by most of us. The average person is interested only when a member of his family is forced to make use of it. One out of 10 of our population of 120,000,000 uses the hospital each year.

There are 7,000 hospitals in this country containing 900,000 beds, representing an investment of more than three billion dollars. The hospital is fifth in the list of industries from the standpoint of capital investment. As about ninety per cent of the hospitals are non-profit institutions, they cannot be considered a business but a service institution as important to the community as the school, police, or fire department. They must be able to serve a scientifically trained medical profession in the care of all people regardless of their social or financial standing, therefore they are public agencies and come under the head of public improvements as mentioned by our president.

No agency is better able to observe the effects of unemployment than the hospital. As I speak to you, thousands of individuals are patients in public hospitals who have not used them in the past. Public hospitals are being put to a test exceeded only by the influenza epidemic of 1918. The out-patient departments are being taxed to the limit. This condition is a result of business depression and unemployment.

At the onset of the depression mentioned many hospitals were planning improvements and additions, which have been delayed in order to meet this situation. The improvements are important, and those responsible for the conduct of such institutions recognize that the hospital is in position to contribute much to the solution of unemployment by proceeding with their building programs at this time.

Most of us think of the general hospital in connection with the care of medical and surgical conditions, but statistics show that more than half of our hospital beds are in mental institutions. It is well known that in most states such institutions are over-crowded, and in many of them there are fire hazards endangering the lives of the patients. Psychopathic hospitals are needed in many states.

There is a need in most states for additional facilities for the tuberculous patient, and most

tuberculosis hospitals should be remodeled to be able to carry on the surgical treatment of tuberculosis. There is a need in most states for improved care of the convalescent and chronic patient. It is well known that there are more than 375,000 crippled children in this country and many states have made no provision for their care. More than 4,000 crippled children are on the waiting lists of existing hospitals.

Many of our local hospitals need to be modernized to care for contagious diseases.

While there is a surplus of hospital beds in certain centers of the 3078 counties of the United States, there are only 479 county hospitals. Many of these communities owe it to the public to furnish the medical profession with improved facilities. Health centers in many of the communities, now being relieved by funds from the Red Cross, would have prevented much of this suffering.

At this time when the cost of material is low, and when labor is plentiful, it is an advantageous time to carry on building programs wherever desirable and necessary, not only improving conditions for the care of the sick and injured, but to furnish employment for thousands of our citizens. I am sure those responsible for such institutions such as governors, legislatures, hospital boards, city and county officials, and members of the medical profession will consider the hospital a necessary public service for all the people and will give it attention along with building programs for roads and other public improvements, thereby contributing to the health of our own and future generations.

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